South Carolina

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Statewide Communications Interoperability Plan

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December 3, 2007

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97	# Executive Overview

98

99 "In times of emergencies, the public looks to government, particularly their Public Safety
100 officials, to act swiftly and correctly, and do the things which must be done to save lives,
101 help the injured, restore order and protect property. Most disasters occur without warning,
102 but people still expect a rapid and flawless response on the part of government. There is no
103 room for error. Whether it is a vehicle accident, crime, plane crash, special event, or any
104 other Public Safety activity, one of the major components of responding to and mitigating
105 a disaster is wireless communications. These wireless communications systems are critical
106 to Public Safety agencies' ability to protect lives and property, and the welfare of Public
107 Safety officials." (Public Safety Wireless Advisory Committee Final Report to the FCC,
108 1996)

109

110 **What is Interoperability?**

111

112 Interoperability is the ability of public safety providers - law enforcement, firefighters,
113 emergency medical services, emergency management, public utilities, transportation and
114 other personnel – to exchange voice and data communications on demand, in real time. It
115 is the term that describes how radio communications systems should operate between and
116 among agencies and jurisdictions that respond to common emergencies. Differing incident
117 response protocols, planning priorities, funding priorities and funding cycles can make
118 acquiring and deploying interoperable systems difficult. Furthermore, limited availability
119 of radio frequency spectrum for public safety response can also impede interoperability.
120 Public safety agencies require three distinct types of interoperability – day-to-day, mutual
121 aid and task force.

122

123 The Statewide Communications Interoperability Plan (SCIP) for South Carolina addresses
124 the following topics:

125

126 Background
127 Methodology
128 Current Statewide Assessment
129 Strategy
130 Implementation
131 Funding

132

133 **Background** – South Carolina's public safety communications interoperability has
134 evolved over the past thirty years. The initial efforts began with mutual aid channels for
135 law enforcement agencies that utilized both VHF and UHF frequencies. Also statewide
136 VHF mutual aid channels were designated for emergency medical services. After
137 Hurricane Hugo in 1989 several coastal counties realized that their existing radio systems
138 were inadequate for disaster response and installed 800 MHz trunked radio systems. Also
139 South Carolina Electric and Gas Company began the installation of an 800 MHz radio
140 system for their corporate communications. This was expanded to provide service for state
141 and local governments and evolved into today's Motorola managed Palmetto 800 Network

142 which provides statewide 800 MHz trunked radio service. Service is available to all public
143 safety agencies, power/utilities, healthcare, and all federal agencies in South Carolina in
144 accordance with FCC rules and regulations. During emergency situations, service may be
145 provided to other support agencies, such as the Red Cross.
146
147 **Methodology** - A collaborative methodology was utilized in the development of the
148 statewide plan. The core participants were members of the Counter Terrorism Coordination
149 Council (CTCC), the South Carolina 800 MHz Trunking Advisory Committee, the
150 Palmetto 800 User's Group and the Local Government Communications Association. The
151 members of these groups represent state and local government law enforcement, fire
152 service, emergency medical service, emergency management agencies, power utilities and
153 federal agencies. The planning process included the review of previous assessments,
154 existing interoperability plans and procedures and on-going interoperability efforts.
155 Meetings were held in the four CTCC Regions throughout the months of October and
156 November. The planning participants will continue to participate in periodic plan reviews,
157 updates and additions. Implementation of the Interoperable Communications Plan
158 throughout South Carolina will require a collaborative statewide effort.
159
160 **Current Statewide Assessment** – In 2006 an assessment was made of the interoperable
161 communications capabilities of each major state agency and each county in South
162 Carolina. These assessments revealed a significant need for improvement in the following
163 areas:
164   ▪ Assistance in acquisition of equipment and services for participation in the statewide
165   standards-based shared radio system
166   ▪ Development of interoperability Standard Operating Procedures (SOPs) for Fire and
167   EMS services
168   ▪ Development of local interoperability plans
169   ▪ Development of local interoperability agreements and SOPs
170   ▪ Development of Command and Control Policies
171   ▪ Acquisition of redundant, secure and fault tolerant communications systems
172   ▪ Interoperability and maintenance funding
173   ▪ Continuity of Communications Plans
174   ▪ Training on interoperability communications equipment
175   ▪ Emergency response plans management structure compliance with NIMS
176   ▪ Inclusion of VHF and UHF users in interoperability planning and coordination
177   ▪ Inclusion of VHF and UHF users in the governance structure
178
179 These shortfalls are addressed in this plan.
180
181 First responders in South Carolina use various means of communication but primarily
182 VHF, UHF and 800 MHz radios. While law enforcement has made a significant shift to
183 800 MHz in recent years, a majority of Fire and EMS services continue to use the VHF or
184 UHF frequency bands. Since the Palmetto 800 Network is the only statewide shared
185 service for public safety interoperability, the use of its many mutual aid talkgroups is the
186 primary means of interoperability in the state. These talkgroups, along with the national
187 and state tactical channels, are available to the over forty thousand 800 MHz radios in the

188　state. In addition to the Palmetto 800 Network, the following local governments use 800
189　MHz systems: Beaufort County, City of Charleston, Charleston County, Florence County,
190　Horry County, Marion County, Sumter County and York County. Interoperability with
191　these systems has been accomplished by the sharing of Radio IDs and the use of standards-
192　based radios. Since the Palmetto 800 Network is a fee-for-service provider, the State
193　Legislature provided funding in July 2007 that reduced these costs by 33% for state
194　agencies and local government first responders. Grants are also made available to the local
195　government 800 MHz systems to assist them with Palmetto 800 Network interoperability.
196　While many agencies utilize VHF or UHF frequencies for their daily communications, 800
197　MHz radios have been provided for interoperability. The SCIP has identified a need to
198　gather detailed information on these VHF and UHF radio systems in order to develop
199　improved interoperability plans. These systems must switch to narrowband operation by
200　January 1, 2013 which will require additional planning and funding.
201
202　**Strategy** – The SCIP establishes the following goals to address problems identified such as
203　coverage, availability of radios, radio systems database, training, exercises, governance
204　and planning:
205
206　Goal 1 – Enhance and Expand Statewide Communications Interoperability
207　Goal 2 – Continue Statewide Infrastructure Enhancement and Expansion
208　Goal 3 – Enhance Safety and Security
209　Goal 4 – Improve Spectrum Efficiency
210　Goal 5 – Develop a Database of State and Local Public Safety Radio Systems
211　Goal 6 – Provide Training for all Supplied Interoperability Equipment
212　Goal 7 – Evaluate Communications Interoperability Exercises
213　Goal 8 – Enhance the State's Cache of Interoperability Radio Equipment
214　Goal 9 – Enhance the Development of the Existing Interoperability Capabilities
215　　　　　to Support Local Government Interoperability
216　Goal 10 – Enhance the Governance and Interoperability Planning
217
218　**Implementation** - Implementation of the Statewide Communications Interoperability Plan
219　throughout South Carolina will require a statewide effort. These responsibilities for Public
220　Safety Interoperable Communications implementation efforts are broken down by
221　governmental level. PSIC Implementation Oversight will be carried out by the
222　Communications Subcommittee of the State Counter Terrorism Coordinating Council
223　(CTCC) in coordination with the CIO. The State Law Enforcement Division (SLED) is the
224　lead agency for Homeland Security in the state and is responsible for the oversight of all
225　Department of Homeland Security initiatives within the State. The Division of the State
226　Chief Information Officer (SCCIO) will assist SLED in the implementation of PSIC
227　initiatives and provide direct oversight of Interoperable Communications activities
228　throughout the State.
229
230　**The SCIP proposes the following Strategic Initiatives to address the previously**
231　**mentioned capability gaps in accordance with the goals listed above**:
232

233   ***Western Piedmont Interoperability Initiative***. *Migrate all first responders in Anderson*
234   *County to the Palmetto 800 Network. Support 800 MHz communications systems*
235   *throughout the county and Piedmont region--Anderson is building a P-25 sub-cell on the*
236   *Pal 800 system and is purchasing radios for the region.*
237
238   ***Department of Public Safety Communications Upgrade***. *DPS radios must be upgraded*
239   *to maintain interoperability with P25 and Omni Link 800 MHz systems. Upgrading to P25*
240   *and Omni Link enables S.C. DPS to communicate with multiple jurisdictions/disciplines*
241   *throughout the State and with the VIPER system in North Carolina.*
242
243   ***Georgetown Simulcast Upgrade***. *Addition of a Pal 800 Network simulcast site at Garden*
244   *City/Murrell's Inlet will provide interoperable communications to a densely populated,*
245   *high tourist area that is highly vulnerable to hurricanes/tropical systems and is in an*
246   *earthquake zone.*
247
248   ***Greenville County Simulcast Upgrade***. *The 800 MHZ coverage in Greenville County is*
249   *inadequate and requires an additional simulcast sub-cell site to enhance coverage. This is*
250   *a highly populated region with critical economic infrastructure and interstate corridors.*
251
252   ***Statewide Interoperability***. *Populate the National CASM tool to give SC a data base of*
253   *interoperable equipment and frequencies for SC. Staffing and coordinator support will be*
254   *used to maintain the plan, help manage the PSIC grants and implement the plan.*
255
256   ***Jasper County Tower***. *A new Palmetto 800 Network tower will enhance coverage in areas*
257   *with little to no coverage allowing state and local government first responders, and*
258   *dispatch centers to communicate.*
259
260   ***Charleston Consolidated 911 Dispatch***. *Design a Consolidated 9-1-1 Center for*
261   *Charleston County utilizing interoperable data networks for rapid deployment of*
262   *emergency responders.*
263
264   ***Statewide Radio Project***. *Purchase and upgrade radios for six counties and one college to*
265   *be compatible with the Palmetto 800 Network, increasing interoperability across the state.*
266
267   ***Strategic Technology Reserve***. *Purchase a portable satellite based VoIP phone and data*
268   *system to support local and state government first responders for disasters and*
269   *emergencies. Augment Radio cache with (25) UHF, (25) VHF and (100) 800 MHz/P-25*
270   *radios.*
271
272
273   **Funding** - There are a number of funding sources available to South Carolina from
274   Legislative funding, to user fees and surcharges, as depicted in Table 17, which can be
275   leveraged for grant funding. Also, the Homeland Security Grant Program (HSGP), along
276   with other preparedness funds can be leveraged to support this Plan. The South Carolina
277   Legislature is responsible for determining the most appropriate funding approach for South
278   Carolina interoperability. The South Carolina 911 legislation does allow local governments

279   the discretion to utilize some of their 911 fees to cover recurring fees to participate in the
280   Palmetto 800 Network.
281
282   Point of Contact / State Interoperability Coordinator for Plan Implementation is:
283
284   George Crouch, Wireless Manager
285   Division of the State Chief Information Officer
286   4430 Broad River Road
287   Columbia, South Carolina 29210
288   (803) 896-0367 office
289   (803) 896-0098 fax
290   gcrouch@cio.SC.gov
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South Carolina
Statewide Communications Interoperability Plan

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302

303   1   INTRODUCTION

304

305   The Statewide Communications Interoperability Plan (SCIP) is the collaborative effort by
306   the State's Counter Terrorism Coordinating Council (CTCC) (refer to Exhibit 1), the
307   Regional CTCC's (refer to Exhibit 1), the Division of the State Chief Information Officer
308   (CIO), the South Carolina 800 MHz Trunking Advisory Committee (refer to Exhibit 2), the
309   Palmetto 800 User's Group (refer to Exhibit 5) and the Local Government
310   Communications Association (refer to Exhibit 3). These groups combined represent
311   elected officials; state and local government agencies in the areas of law enforcement, fire
312   service, emergency medical service, emergency management; power utilities in South
313   Carolina, agencies in Augusta-Richmond County, Georgia and federal agencies. These
314   combined groups represent forty thousand 800 MHz radio users in more than 500 agencies
315   (over 22,000 of these are Palmetto 800 users in 350 agencies) across South Carolina. UHF
316   and VHF users also sit on the State CTCC and Regional CTCC advisory councils. 800
317   MHz, UHF, and VHF users had equal opportunity to provide input to this plan and the
318   associated Investment Justifications.
319

320   Additional input on the SCIP was obtained by distributing a draft to the State Counter
321   Terrorism Coordinating Council, the Regional Counter Terrorism Coordinating Councils,
322   the Palmetto 800 Network Users Group, the federal partners, the power utility partners, the
323   South Carolina National Guard, the Fireman's Association, the EMS Association, the
324   Sheriff's Association,   Law Enforcement Association, the Emergency Management
325   agencies, state agencies, our Augusta, Georgia partners and any other agencies that may be
326   interested in commenting on the South Carolina Plan.
327

328   State, local and federal government public safety agencies along with power utility
329   providers in South Carolina and the agencies in Augusta-Richmond County, Georgia have
330   made significant transitions to a common 800 MHz technology platform since 1992. The
331   statewide shared public safety/utility trunked radio system is known as the Palmetto 800
332   Network. Because of the maturity of the Palmetto 800 Network and the eight local
333   government 800 MHz trunked systems, South Carolina's initial efforts in interoperability
334   planning have been focused on the use of 800 MHz. South Carolina has held numerous
335   meetings to provide education on the continuing need for interoperability planning and
336   training. These training events have been open to all public safety including 800 MHz
337   users, VHF, UHF, and any other communication systems.
338

339   South Carolina has had a statewide 800 MHz interoperability plan since 1998. The
340   preparation of the SCIP has allowed South Carolina to review its current plan and make
341   some minor adjustments. South Carolina is hoping that the national attention being given

342 to interoperability planning will encourage our local, federal, utility and state government
343 partners to continue working on local interoperability plans.
344
345 In 1999 the South Carolina Public Safety Coordinating Council issued the Statewide
346 Public safety Communications Report. The report laid out the long term recommendations
347 and strategies for the development of a statewide interoperable communication system
348 shared by all public safety first responders. Many of these recommendations have been
349 accomplished, including: Implement a Statewide Wireless Communications Network
350 (Palmetto 800 Network), Adopt a Multi-Agency Governing Structure (South Carolina 800
351 MHz Trunking Advisory Committee), Form a Communications Systems User Group
352 (Palmetto 800 User's Group), Pursue Funding Sources (state and federal funds have been
353 made available), Encourage Creative Solutions to System Development (Palmetto 800
354 Network has public and private ownership).
355
356 The South Carolina SCIP was developed around the State's existing 800 MHz
357 communications interoperability plan that has been in place for years. The various
358 committees (South Carolina 800 MHz Trunking Advisory Committee, the Palmetto 800
359 User's Group, and the Local Government Communications Association) felt that the
360 State's present interoperability plan works very well and those talkgroups and channels
361 have already been programmed into over 40,000 of our radios statewide. The existing plan
362 has been exercised and tested during numerous special events, evacuations and real
363 disasters through the years. It has proven to be effective for South Carolina and will be at
364 the core of the new SCIP. Also, statewide communications interoperability classes
365 utilizing the existing communications interoperability plan have been conducted through
366 the Criminal Justice Academy and Fire Academy.
367
368

369 ## 2 BACKGROUND

370
371 The South Carolina 800 MHz Trunking Advisory Committee (refer to Exhibit 2), the Local
372 Government Communications Association (refer to Exhibit 3), the Division of the State
373 Chief Information Officer (CIO) and the State Law Enforcement Division are the key stake
374 holders in the development and writing of the plan. The main framework for the plan was
375 briefed at the Regional CTCC meetings which comprised communication users in the 800,
376 UHF, and VHF spectrum. Also, a draft copy of the plan was provided to these councils for
377 review prior to the meetings. During the meetings, there were no substantial comments to
378 the framework, or information/vision, contained within the plan. These regional meetings
379 were designed to provide transparency of the planning process and ensure that all spectrum
380 users had ample opportunity to provide inputs and/or comments. In each of the regional
381 meetings, it was noted that this SCIP plan was the overall state vision for interoperable
382 communications.
383
384 In the 1970's a regional law enforcement mutual aid radio plan was developed for South
385 Carolina. This plan was based on the ten Council of Government Regions (refer to Exhibit
386 8) and utilized VHF High Band and UHF frequencies in a checker board arrangement.

387 Each region had a common channel assigned for interoperability. Many of those counties,
388 who still use VHF or UHF frequencies for primary dispatch, continue to use these mutual
389 aid channels. Also in the 1970's a statewide VHF High Band radio plan was developed for
390 the Emergency Medical Service (EMS) operation. EMS has a common statewide channel
391 assigned for interoperability. The channel is still inexistence today and continues to be
392 used by many EMS Services. The EMS VHF radio plan is still being utilized in much of
393 the state but EMS has also begun a migration to 800 MHz in some areas. The EMS radio
394 plan is under review and will be updated as required. While the fire services still primarily
395 utilize VHF frequencies in much of the state, many fire departments in cities and counties
396 that utilize 800 MHz for other public safety services have begun a migration to 800 MHz.
397 The State has identified and licensed State interoperability frequencies in the VHF and
398 UHF bands for non-800 MHz system users. These frequencies are incorporated into the
399 SCIP along with the national VHF and UHF interoperability frequencies.
400
401 After Hurricane Hugo in 1989, several counties installed 800 MHz trunked radio systems
402 to improve communication capabilities. These systems were all based on the Motorola 3.0
403 trunking platform with Charleston County currently implementing a P-25 system. In 1992
404 the State of South Carolina began developing a statewide interoperable trunked radio
405 system based on the Motorola SmartZone® platform. The State partnered with South
406 Carolina Electric &Gas Company, a major power utility, in the development of the shared
407 statewide 800 MHz trunked radio system. Today the statewide radio system is operated by
408 Motorola and supports over 22,000 radio users representing over 350 public safety
409 agencies in South Carolina and Georgia (as referenced earlier in this plan, there are a total
410 of 500 agencies which have access to the system). Key to the development of the radio
411 system known today as the "Palmetto 800 Network" was the Motorola SmartZone®
412 statewide platform that allowed the eight local government trunked radios systems to have
413 interoperability with the statewide Palmetto 800 Network. A part of the development of the
414 statewide shared radio system was the creation of the of the South Carolina 800 MHz
415 Trunking Advisory Committee (refer to Exhibit 2) which represents state and local law
416 enforcement, local fire services, local EMS, local Emergency Management, local
417 government 800 MHz systems and power utilities. This twenty-one member committee is
418 tasked with providing guidance to the Division of the State Chief Information Officer
419 (CIO) in the management of the statewide 800 MHz radio system, the Palmetto 800
420 Network.
421
422 The State of South Carolina implemented a statewide interoperability plan for the users of
423 the Palmetto 800 Network in the mid-1990's (refer to Sections 4.2.1 and 4.2.2 for details).
424 This plan includes the use of trunked mutual aid talkgroups, International Tactical (ITAC)
425 conventional channels and repeaters and South Carolina Tactical (SCTAC) 800 MHz
426 mutual aid channels and repeaters. Every county in South Carolina has been equipped with
427 at least one (1) of these mutual aid conventional repeaters using the ITAC or SCTAC
428 frequencies. These resources are available for statewide interoperability on a daily bases.
429 This plan has been woven into public safety 800 MHz radios across South Carolina since
430 the late 1990's. It has been well tested through numerous plans, exercises and disasters.
431 The State and several agencies also utilize console patches and interoperability switches to
432 connect to non-800 MHz radio systems (specifically UHF and VHF). The Palmetto 800

433   Network also requires each of its users to submit an essential operations plan. The plans,
434   when implemented during an emergency, reduce an agencies number of talkgroups by 50%
435   to help manage system loading during emergency situations that create higher than normal
436   usage.
437
438   In 2000, as part of the statewide trunked interoperability plan, the State and several of the
439   local government 800 MHz trunked systems began deploying conventional 800 MHz
440   repeaters around the State to overlay the trunked system (refer to Section 4.2.2 for details).
441   The conventional statewide network is made up of the International Tactical (ITAC)
442   channels and South Carolina Tactical (SCTAC) channels. Today there are over 89
443   conventional repeater sites representing over 100 conventional repeaters. Every county in
444   South Carolina has at least one conventional 800 MHz repeater installed. The larger
445   metropolitan areas have multiple 800 MHz repeaters. Conventional 800 MHz repeaters
446   have also been installed near critical infrastructures and universities.
447
448   The extensive use of 800 MHz for first responder communications in South Carolina
449   allows for direct interoperability with 700 MHz by incorporating 700 MHz frequencies as
450   additional capacity for the 800 MHz systems. Where necessary, the user radios will be
451   replaced with those that will operate in both the 700 MHz and 800 MHz bands. Since
452   2001, 800 MHz radios purchased with preparedness funds (specifically homeland security
453   funding) are capable of operation in both the 700 MHz and 800 MHz bands. All of these
454   radios are either P-25 equipped or capable of being upgraded to the P-25 digital mode.
455
456   South Carolina is fortunate in that it has a statewide communications system, the Palmetto
457   800 Network, which is utilized by various agencies (both local and state) for daily use and
458   command and control. This network has been selected as the state's interoperability
459   platform. Due to its overall coverage, accessibility in each county, extensive use of state,
460   local, public, and private users, the Palmetto 800 Network will be the key interoperability
461   solution for the state. The Palmetto 800 Network is managed by the State CIO's office that
462   provides for efficient and effective management of the shared system. The Palmetto 800
463   Network is a partnership between the State and Motorola (who monitors the system and
464   covers maintenance costs of the system with the assistance of monthly charges to users).
465   The Palmetto 800 network is vital for mutual aid in that Mutual Aid talkgroups can be
466   assigned for real-time use during incidents. These talkgroups are reserved so that they are
467   available for use at all times.
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482   **Chart 1 SAFECOM Interoperability Continuum for VHF and UHF Systems Statewide**

Chart 1 SAFECOM Interoperability Continuum for VHF and UHF Systems Statewide
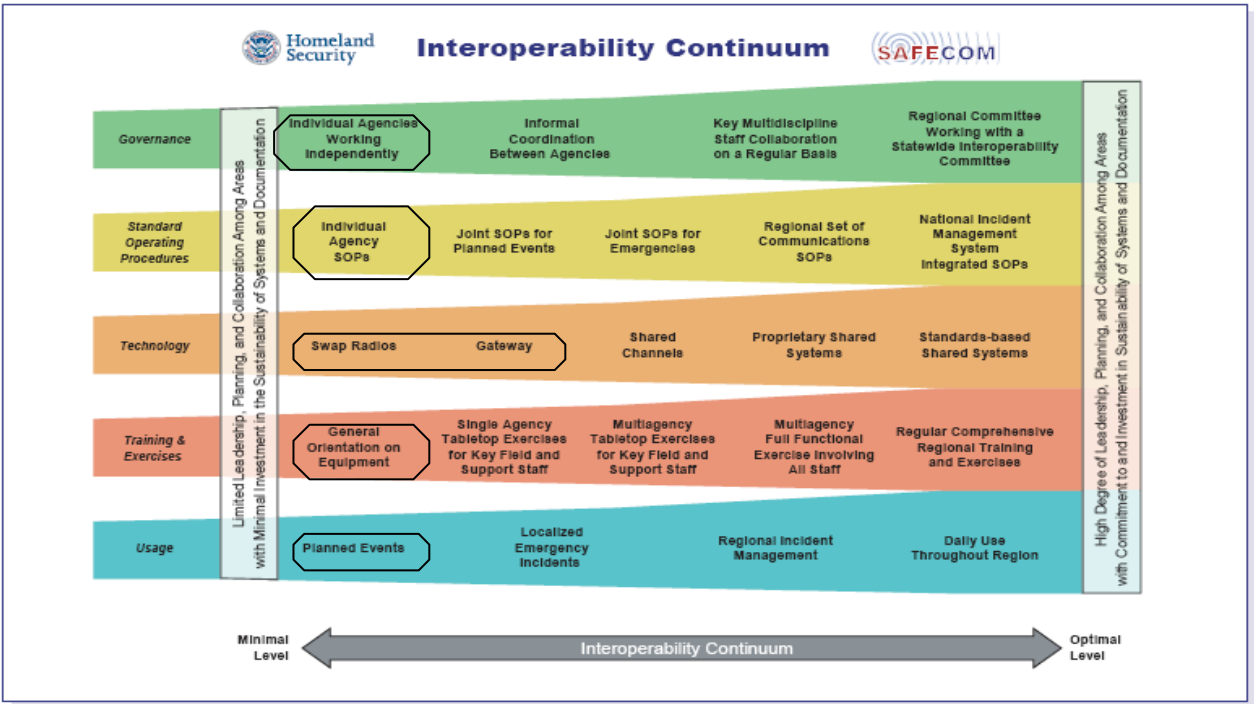
483
484
485   Within the State of South Carolina, there are three basic communication systems utilized
486   for public safety, UHF, VHF, and 800 MHz. The Interoperability Continuum Chart 1
487   shows VHF and UHF systems are at the minimum level of interoperability statewide.
488   There is no statewide governance structure for UHF and VHF systems. Individual
489   agencies work independently with no coordination among responding agencies. Although
490   the State has identified and licensed state interoperability frequencies in the VHF and UHF
491   bands for non-800 MHz system users for mutual aid, there are National VTACs and
492   UTACs. There is not an organization of users to coordinate use of these frequencies.
493   Additionally, the mutual aid channels for both the state and national identified VHF mutual
494   aid frequencies are direct radio to radio operations only. Standard Operating Procedures
495   (SOPs) for UHF and VHF users are typically uncoordinated between agencies.
496   Communication plans are slowly becoming a standard for planned events and 800 MHz is
497   typically utilized during these events. Due to limited number of channels in many
498   agencies' VHF and UHF radios, agencies typically swap radios or utilize gateways, which
499   used improperly, can cause communication problems. The amount of training that is
500   conducted with VHF and UHF systems is unknown. Because tabletop exercises usually
501   utilize the 800 MHz for command and control, it is estimated that little UHF and VHF
502   training occurs outside of the initial orientation. Only in specific instances do agencies
503   exchange communication channels for planned events. VHF and UHF systems may be
504   utilized during localized emergency incidents, but responding agencies are often not on the
505   same channel unless it is a specified mutual aid channel.
506
507
508

509
510
511   **Chart 2 SAFECOM Interoperability Continuum for 800 MHz Statewide**
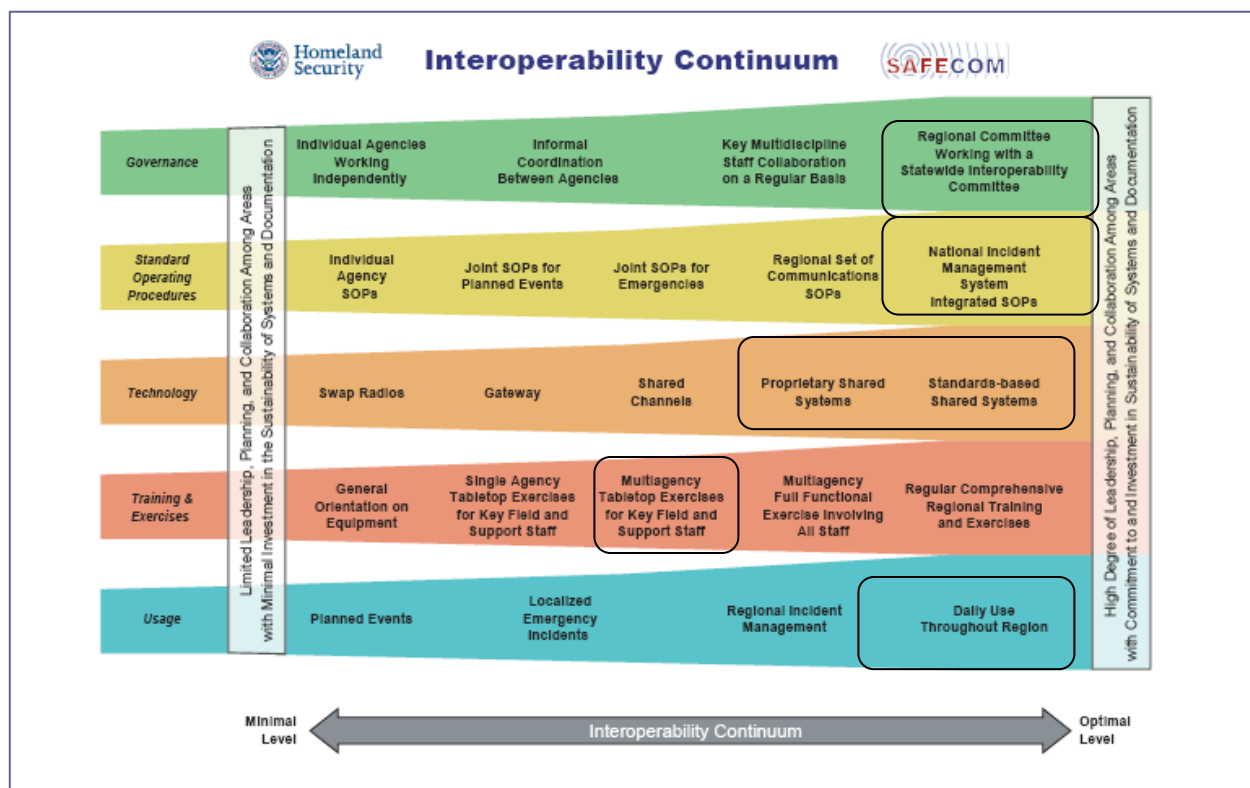
512
513
514   For the Palmetto 800 Network, great progress has been made with respect to
515   Interoperability Continuum as indicated in Chart 2. There are several governance
516   structures within South Carolina that work together across the state. Primary among these
517   is the State Counter Terrorism Coordinating Council (CTCC). The CTCC was established
518   via Executive Order to address Homeland Security Concerns in the State—to include the
519   State's highest priority concern of interoperable communications. The CTCC is now
520   serving as the Statewide Interoperability Executive Committee (SIEC).   In addition, as a
521   member of the State CTCC, the Division of the State CIO (a nonpublic safety agency)
522   manages a key aspect of interoperable communications through its administration of the
523   Palmetto 800 Network. It is also providing the State's Interoperability Coordinator.
524   Perhaps, most importantly, the State CIO is the sole state agency authorized by the
525   legislature to enter into and manage State communications contracts. Within the Palmetto
526   800 network, system user input is provided by the South Carolina 800 MHz Trunking
527   Advisory Committee ("800 Advisory Committee"). To ensure that the contract provider of
528   the statewide radio system is fully aware of the CIO's cooperative management style with
529   the users of the Palmetto 800 Network, the 800 Advisory Committee and cooperative
530   management style of the system is written into the State Contract with Motorola. The
531   private 800 MHz systems (Beaufort County, Charleston County, Florence County, Horry
532   County, Sumter County, York County, Marion County, and City of Charleston) have
533   formed the Local Government Communications Association in which they work together

534 and also have representation on the Palmetto 800 Advisory Committee. This relationship
535 is spelled out and diagramed in section 4.1.
536
537 As represented in Section 4.3, there are several statewide SOPs for interconnecting with
538 the Palmetto 800 Network. These SOPs include both 800 users who need to connect as
539 well as non-800 users. The South Carolina Statewide 800 MHz Radio and Mobile Data
540 System is a cost-shared public/private partnership between state government, local
541 governments, power utilities and Motorola, Inc. The system is a Motorola SmartZone®
542 trunked system with 69 transmitter sites across South Carolina and Georgia. Section 4.2
543 provides more details for all 800 MHz systems in the state.
544
545 Although the State has a robust training and exercise program hosted by the South
546 Carolina Emergency Management Division, communication specific training is lacking.
547 While communications is typically incorporated into the exercises, it is rarely given the
548 proper evaluation value with the exception of the Charleston Tactical Interoperable
549 Communications Plan (TICP). SOP and Usage were rated as Established Implementation
550 during this exercise. Formal governance was suggested as a necessary area for
551 improvement. The TICP exercised UHF, VHF, Palmetto 800, Charleston County 800, and
552 City of Charleston 800. Palmetto 800 is utilized in a large portion of the state for command
553 and control and some agencies utilize it on a day to day basis. 42% of public safety
554 agencies use 800 MHz as their primary frequency band use. Within the private owned
555 systems, 800 MHz is the primary communication system.
556
557 Although not clearly represented on the Continuum, South Carolina needs to improve in
558 the areas of Governance and Training & Exercises for the 800 MHz and in all areas for
559 UHF and VHF. In the Governance area South Carolina needs to continue to work on
560 codifying its governance for the support of the Statewide Interoperability Plan and the
561 elements of the SAFECOM Interoperability Continuum. Also representation needs to be
562 expanded to include additional VHF and UHF users. In the area of Training & Exercises
563 South Carolina needs to continue the interoperability training classes and develop plans to
564 exercise the use of interoperable communications, in support of the Exercises element of
565 the Interoperability Continuum, in conjunction with other exercises or as stand alone
566 exercises to evaluate progress. In the area of Technology, enhancements need to be made
567 to capacity and coverage while continuing efforts to reduce recurring costs to users.
568
569 Public safety agencies in South Carolina will benefit from the SCIP through enhanced
570 interoperability coverage, expanded cache of communications equipment, the inventory
571 and assessment of VHF and UHF systems, continued training and communications
572 oriented exercises. The CASM efforts and Communication Planners, requested to
573 implement this SCIP, will be involved in the "plan to plan" for 800 MHz migration. More
574 than one of the privately owned 800 MHz systems have expressed interest in joining the
575 Palmetto 800 Network. Also, as UHF and VHF radios transition to narrowband, it is
576 expected that more agencies will be transitioning to the Palmetto 800 Network.

577

2.1 State Overview

579

580 South Carolina is politically sub-divided into 46 counties and has 217 incorporated cities
581 and towns. The state is also sub-divided into various regions for law enforcement,
582 emergency management, emergency medical service, 800 MHz Mutual Aid, VHF and
583 UHF Mutual Aid and other operations. Each City and County operates under a home-rule
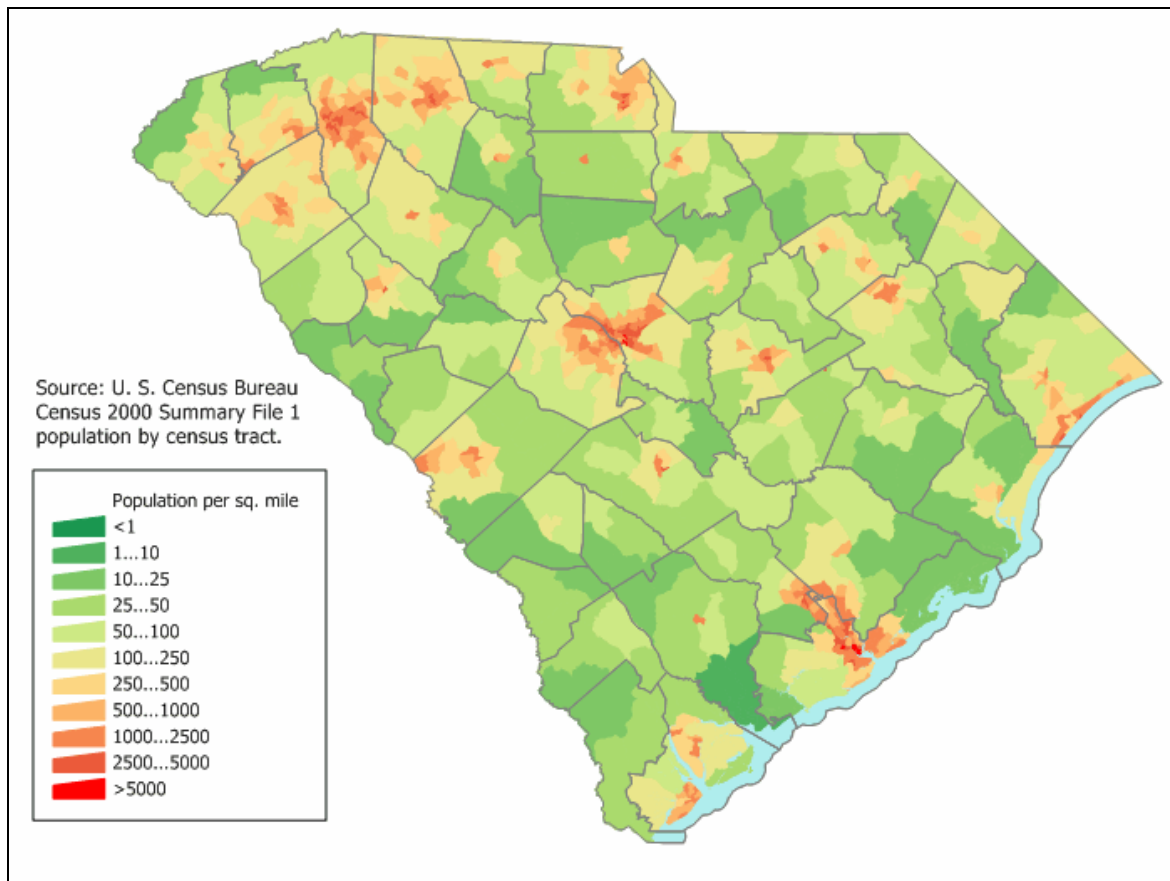584 form of government.

585

586 Based on the 2000 census South Carolina has a population of 4,012,012 making it rank 26
587 in size in the nation. South Carolina covers 32,007 square miles comprised of a land area
588 30,111 square miles and a water area of 1,896 square miles. The state's average population
589 per square mile is 133. The state is bordered by North Carolina, Georgia and the Atlantic
590 Ocean. South Carolina's coastline extends for 187 miles. However, if all bays, inlets, and
591 islands are considered, the coastline measures 2,876 miles.

592
593 **Chart 3 South Carolina Population Density Map**
594

Source: U. S. Census Bureau
Census 2000 Summary File 1
population by census tract.

Population per sq. mile
<1
1...10
10...25
25...50
50...100
100...250
250...500
500...1000
1000...2500
2500...5000
>5000

595
596
597
598

599   As shown in the Chart 3 Population Density Map, the greatest population is located along
600   the coast, in the midlands and along the I-85 corridor in the upstate.

601

602   Annually 32.5 million people take trips in South Carolina – 19 million out-of-state visitors,
603   5 million in-state visitors and 8.5 million pass-through visitors. In 2004 the state had
604   3,257,000 registered vehicles, 2,972,000 licensed drivers and 2,870 roadway miles of
605   which 844 miles are interstate highways.

606

607   Several factors control South Carolina's climate. Most important are the state's location in
608   the northern mid-latitudes, its proximity to both the Atlantic Ocean and the Appalachian
609   Mountains, and its elevation. The state's annual average temperature varies from the mid-
610   50's in the mountains to low-60's along the coast. During the winter, average temperatures
611   range from the mid-30's in the Mountains to low-50's in the Lowcountry along the coast.
612   During summer, average temperatures range from the upper 60's in the mountains to the
613   mid-70's in the Lowcountry. Wintry precipitation (snow, sleet, and freezing rain) also
614   affect South Carolina. Snow and sleet may occur separately, together, or mixed with rain
615   during the winter months from November to March, although snow has occurred as late as
616   May in the mountains. Measurable snowfall may occur from one to three times in a winter
617   in all areas except the Lowcountry, where snowfall occurs on average once every three
618   years. Accumulations seldom remain very long on the ground except in the mountains.
619   Severe weather occurs in South Carolina occasionally in the form of violent thunderstorms,
620   hurricanes, flooding and tornadoes. Although less frequent than surrounding states,
621   thunderstorms are common in the summer months. The more violent storms generally
622   accompany squall lines and active cold fronts of late-winter or spring. Strong
623   thunderstorms usually bring high winds, hail, considerable lightning, and sometimes spawn
624   a tornado. Tropical cyclones affect the South Carolina coast on an infrequent basis, but do
625   provide significant influence annually through enhanced rainfall inland during the summer
626   and fall months. Depending on the storm's intensity and proximity to the coast, tropical
627   systems can be disastrous. The major coastal impacts from tropical cyclones are storm
628   surges, winds, precipitation, and tornadoes.

629

630   South Carolina is threatened by natural and technological hazards. The threat posed by
631   these hazards is both immediate (e.g., hazardous chemical spill, hurricane, tornado) and
632   long-term (e.g., drought, chronic chemical release). These hazards have the potential to
633   disrupt day-to-day activities, cause extensive property damage, and create mass casualties.
634   Historically, the greatest risk was perceived to be from natural hazards (e.g., hurricanes,
635   tornadoes, severe storms, floods, earthquakes). However, the continued expansion of
636   chemical usage is raising the risk posed by technological hazards (e.g., hazardous chemical
637   releases/spills) in South Carolina, as evidenced by the Graniteville Train Derailment in
638   2005.

639

640   South Carolina has several pieces of critical infrastructure and key resources. There are
641   four active nuclear power plants in South Carolina and the Savannah River Site (a nuclear
642   materials processing center). Five major interstates and several natural gas and oil
643   pipelines transverse the state. South Carolina has major airports in Charleston, Columbia
644   and Greenville-Spartanburg areas. The Port of Charleston is the fourth largest port on the

645 east coast. South Carolina also has four military bases and several key suppliers of military
646 goods. Carowinds, a major tourist attraction in the southeast, is also partially located in
647 South Carolina. Tourism and agriculture rank as South Carolina's largest industries.
648 Therefore, assets associated with these industries are vital to the state's economy. The state
649 is home to two major universities (Clemson University and the University of South
650 Carolina) both of which draw crowds close to 100,000 during home football games.
651
652

653
South Carolina Major Highways and Waterways
655 **Chart 4 SC Major Highways and Waterways**
656
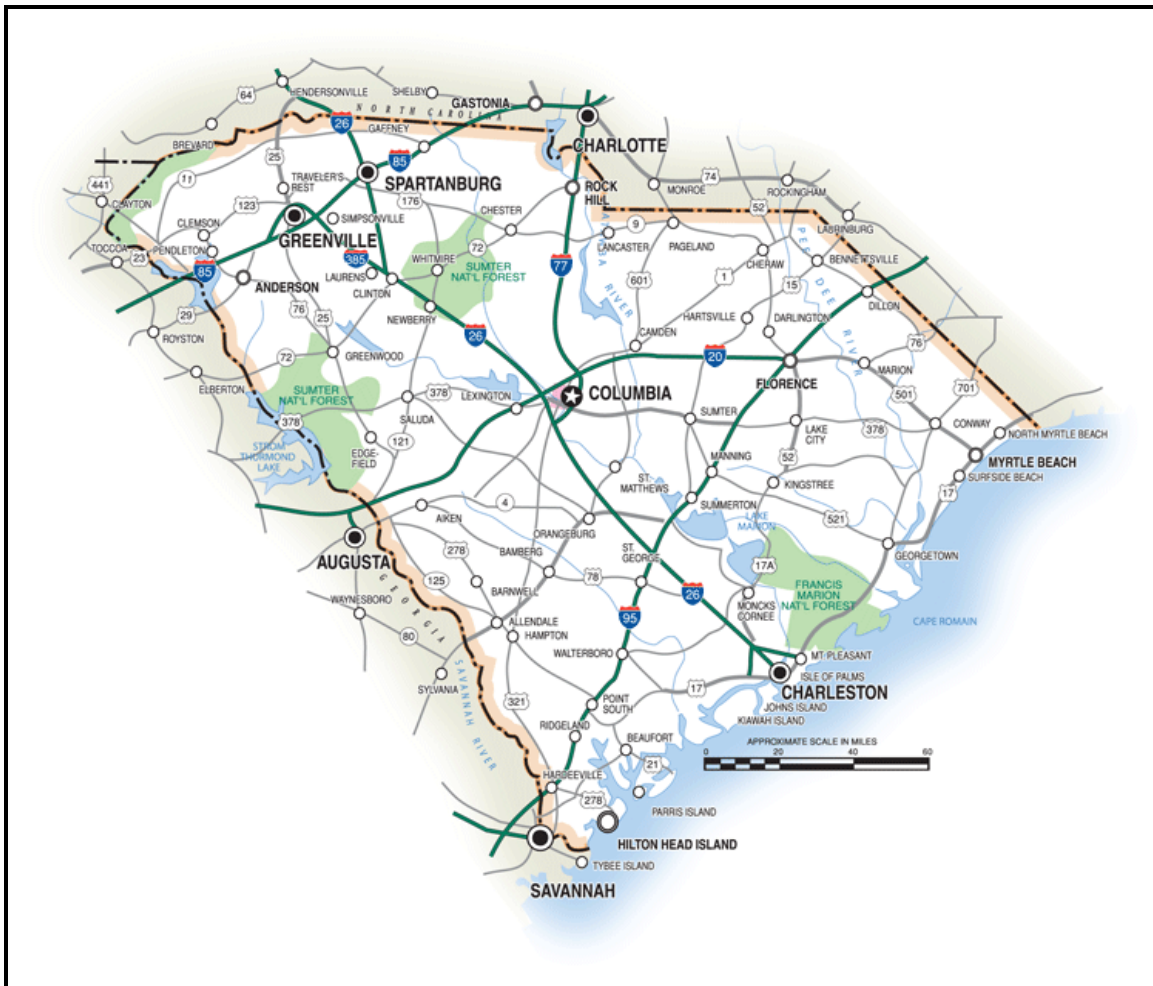
657
658
659
660 Major roadways in South Carolina include the following interstate highways (Chart 4): I-
661 20, I-26, I-77, I-85, and I-95. South Carolina has 71 public airports and 139 private
662 airports. South Carolina has commercial port operations in Charleston and Georgetown.
663 The Intercoastal Waterway transverses the coastal area of the state from the North Carolina
664 border to the Georgia border. Major lakes include Clarks Hill Lake, Lake Hartwell, Lake
665 Greenwood, Lake Marion, Lake Moultrie, Lake Murray, Lake Wateree and Lake Wylie.

666

667 South Carolina has the foothills of the Appalachian Mountains in its northwest corner, the
668 Atlantic Ocean on its eastern border, eight large lakes, 47 state parks and recreation areas,
669 several national forests and thousands of acres of undeveloped woodlands, all of which can
670 affect emergency response services. The State of South Carolina does not border Canada or
671 Mexico.
672

673 Recurring events that require multi-agency coordination include: annual statewide disaster
674 exercises, regional WMD exercises as well as annual college sporting events, auto races,
675 hot air balloon festivals, presidential visits, National Governors Association Conferences,
676 Presidential Debates, horse races, golf tournaments and beach related events with
677 attendances ranging from 50,000 to over 100,000. Several of the motorcycle rallies in the
678 Myrtle Beach area have been known to bring in over 200,000 tourists.
679

680 2.1.1 NIMS/Multi-Agency Coordination System (MCS) Incorporation

681

682 The State of South Carolina, along with all of its counties, has adopted the National
683 Incident Management System (NIMS) and is currently compliant with the requirements.
684 NIMS has been incorporated into the State Emergency Operations Plan and the State
685 Homeland Security Strategy. Governor Mark Sanford of South Carolina, issued Executive
686 order 2005-12 on June 3, 2005 directing the adoption of the National Incident Management
687 System (NIMS) as the standard for incident management in the state. The state developed
688 the National Incident Management System (NIMS) Strategic Implementation Plan to
689 provide the State of South Carolina with a strategic roadmap for coming into full
690 compliance with the intent of NIMS Implementation including the institutionalization of
691 NIMS within the State of South Carolina. Local jurisdictions and state agencies have been
692 tasked, via several joint issued Homeland Security Information Bulletins from the South
693 Carolina Law Enforcement Division (SLED) and the South Carolina Emergency
694 Management Division (SCEMD), to follow the NIMS implementation matrices developed
695 by the NIMS Integration Center (NIC). The National Incident Management Capability
696 Assessment Support Tool (NIMCAST), which is the preferred compliance tool of FEMA,
697 has been utilized to ensure and assess FY 2007 NIMS compliance for both that state and
698 county level. The State continues to fund a NIMS Coordinator for the state whose job
699 duties are to ensure that both state and local agencies understand NIMS and compliance
700 issues. Also, as mentioned above, the State has developed a strategic roadmap to guide
701 NIMS implementation statewide. The Communications Interoperability Procedures for
702 Public Safety Agencies supports unified command, common terminology and integrated
703 communications.
704

705 South Carolina Emergency Management has developed a multi-agency system entitled
706 WebEOC. WebEOC allows interconnectivity between all county EOCs, the state EOC,
707 and the state emergency support functions during normal and emergency operations. It
708 also provides resource and asset tracking as well as NIMS typing statewide. All county
709 911 centers and county EOCs are equipped with Palmetto 800 Network radios for direct
710 access to each other, the state EOC, state highway patrol, hospitals, and law enforcement.

711 The state interoperability SOP requires the use of plain language communications during
712 emergencies.
713
714 In addition, REACH – SC (South Carolina's Emergency Notification System) serves as a
715 reverse 911 system and alert notification system to state emergency response teams.
716

717 ## 2.1.2 Regions/Jurisdictions

718 The state is divided into several planning regions, although they are not legal, governing
719 entities. The CTCC regions, as referenced on Exhibit 7 are utilized for homeland security
720 planning. These regional councils served as the focal point to solicit stakeholder
721 involvement for this plan. The 800 MHz Interoperability Regions, as referenced on Exhibit
722 8, were mirrored after the South Carolina Highway Patrol regions for planning purposes.
723 The ten council of government planning districts, as referenced in Exhibit 9, were utilized
724 for the base for VHF/UHF mutual aid regions.
725
726 Key legal jurisdictions of the state are provided below (Chart 5) and include counties and
727 cities.
728
729 **Chart 5 Regions/Jurisdictions**
730
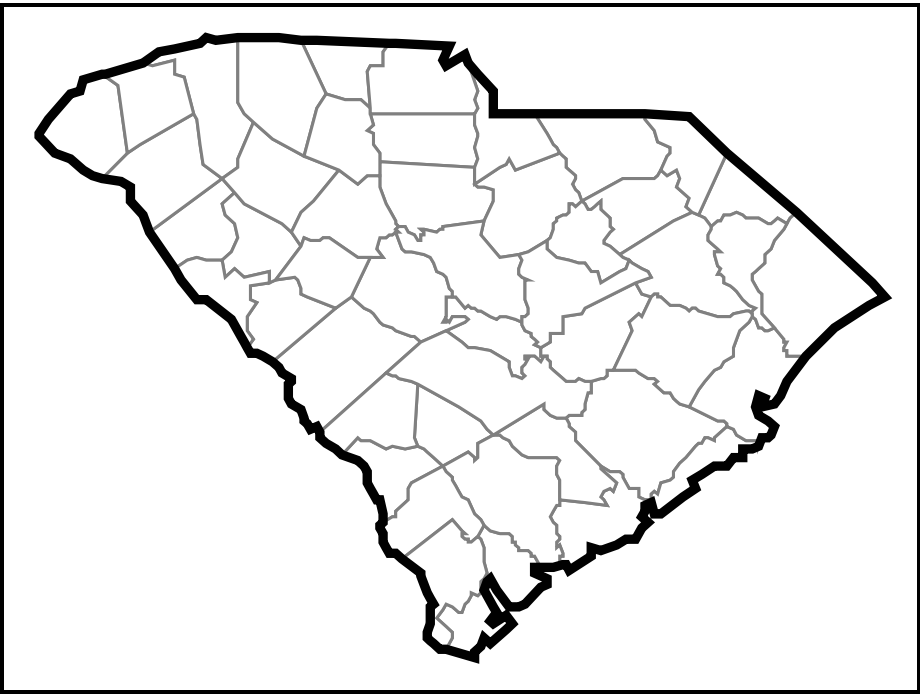
731
732
733
734 <u>**SOUTH CAROLINA INCORPORATED CITIES AND TOWNS BY COUNTY**</u>
735

| ABBEVILLE | - Abbeville (County Seat) | HAMPTON | - Brunson |
| | - Calhoun Falls | | - Estill |

- Donalds
- Due West
- Lowndesville

AIKEN — - Aiken (County Seat)
- Burnettown
- Jackson
- Monetta
- New Ellenton
- North Augusta
- Perry
- Salley
- Wagener
- Windsor

ALLENDALE — - Allendale (County Seat)
- Fairfax
- Sycamore
- Ulmer

ANDERSON — - Anderson (County Seat)
- Belton
- Honea Path
- Iva
- Pelzer
- Pendleton
- Starr
- West Pelzer
- Williamston

BAMBERG — - Bamberg (County Seat)
- Denmark
- Ehrhardt
- Govan
- Olar

BARNWELL — - Barnwell (County Seat)
- Blackville
- Elko
- Hilda
- Kline
- Snelling

- Furman
- Gifford
- Hampton (County Seat)
- Luray
- Scotia
- Varnville
- Yemassee

HORRY — - Atlantic Beach
- Aynor
- Briarcliffe Acres
- Conway (County Seat)
- Loris
- Myrtle Beach
- Nichols
- North Myrtle Beach
- Surfside Beach

JASPER — - Hardeeville
- Ridgeland (County Seat)

KERSHAW — - Bethune
- Camden (County Seat)
- Elgin

LANCASTER — - Heath Springs
- Kershaw
- Lancaster (County Seat)

LAURENS — - Clinton
- Cross Hill
- Gray Court
- Laurens (County Seat)
- Waterloo

LEE — - Bishopville (County Seat)
- Lynchburg

LEXINGTON — - Batesburg-Leesville
- Cayce
- Chapin
- Gaston

	- Williston		- Gilbert
			- Irmo
BEAUFORT	- Beaufort (County Seat)		- Lexington (County Seat)
	- Bluffton		- Pelion
	- Hilton Head Island		- Pine Ridge
	- Port Royal		- South Congaree
			- Springdale
			- Summit
			- Swansea
			- West Columbia
BERKELEY	- Bonneau	MARION	- Marion (County Seat)
	- Goose Creek		- Mullins
	- Hanahan		- Sellers
	- Jamestown		
	- Moncks Corner (County Seat)	MARLBORO	- Bennettsville (County Seat)
	- St. Stephen		- Blenheim
			- Clio
CALHOUN	- Cameron		- McColl
	- St. Matthews (County Seat)		- Tatum
CHARLESTON	- Awendaw	McCORMICK	- McCormick (County Seat)
	- Charleston (County Seat)		- Parksville
	- Folly Beach		
	- Hollywood		- Plum Branch
	- Isle of Palms	NEWBERRY	- Little Mountain
	- Kiawah Island		- Newberry (County Seat)
	- McClellanville		- Peak
	- Meggett		- Pomaria
	- Mount Pleasant		- Prosperity
	- North Charleston		- Silverstreet
	- Ravenel		- Whitmire
	- Rockville		
	- Seabrook Island	OCONEE	- Salem
	- Sullivan's Island		- Seneca
			- Walhalla (County Seat)
			- West Union
CHEROKEE	- Blacksburg		- Westminster
	- Gaffney (County Seat)		
		ORANGEBURG	- Bowman
CHESTER	- Chester (County Seat)		- Branchville

Left column:

- Fort Lawn
- Great Falls
- Lowrys
- Richburg

CHESTERFIELD
- Cheraw
- Chesterfield (County Seat)
- Jefferson
- McBee
- Mount Croghan

- Pageland
- Patrick
- Ruby

CLARENDON
- Manning (County Seat)
- Paxville
- Summerton
- Turbeville

COLLETON
- Cottageville
- Edisto Beach
- Lodge
- Smoaks
- Walterboro (County Seat)
- Williams

DARLINGTON
- Darlington (County Seat)
- Hartsville
- Lamar
- Society Hill

DILLON
- Dillon (County Seat)
- Lake View
- Latta

DORCHESTER
- Harleyville
- Lincolnville
- Reevesville
- Ridgeville
- St. George (County Seat)

Right column:

- Cope
- Cordova
- Elloree
- Eutawville
- Holly Hill
- Livingston
- Neeses

- North
- Norway
- Orangeburg (County Seat)

- Rowesville
- Santee
- Springfield
- Vance
- Woodford

PICKENS
- Central
- Clemson
- Easley
- Liberty
- Norris
- Pickens (County Seat)
- Six Mile

RICHLAND
- Arcadia Lakes

- Blythewood
- Columbia (County Seat)
- Eastover
- Forest Acres

SALUDA
- Monetta
- Ridge Spring
- Saluda (County Seat)
- Ward

SPARTANBURG
- Campobello
- Central Pacolet
- Chesnee

County	Municipalities
	- Summerville
EDGEFIELD	- Edgefield (County Seat) - Johnston - Trenton
FAIRFIELD	- Ridgeway - Winnsboro (County Seat)
FLORENCE	- Coward - Florence (County Seat) - Johnsonville - Lake City - Olanta - Pamplico - Quinby - Scranton - Timmonsville
GEORGETOWN	- Andrews - Georgetown (County Seat) - Pawleys Island
GREENVILLE	- Fountain Inn - Greenville (County Seat) - Greer - Mauldin - Simpsonville - Travelers Rest
GREENWOOD	- Greenwood (County Seat) - Hodges - Ninety Six - Troy - Ware Shoals
	- Cowpens - Duncan - Inman - Landrum - Lyman - Pacolet - Reidville - Spartanburg (County Seat) - Wellford - Woodruff
SUMTER	- Mayesville - Pinewood - Sumter (County Seat)
UNION	- Carlisle - Jonesville - Lockhart - Union (County Seat)
WILLIAMSBURG	- Greeleyville - Hemingway - Kingstree (County Seat) - Lane - Stuckey
YORK	- Clover - Fort Mill - Hickory Grove - McConnells - Rock Hill - Sharon - Smyrna - Tega Cay - York (County Seat)

736
737 **Emergency Response Agencies**
738
739 The state has 1,123 emergency response agencies and departments consisting of 203 law
740 enforcement agencies, 676 fire departments and 244 licensed emergency medical service
741 providers.
742
743 State emergency response agencies in South Carolina include the: State Law Enforcement
744 Division, South Carolina Department of Public Safety, South Carolina Department of
745 Natural Resources, South Carolina Emergency Management Division, Division of the
746 State Chief Information Officer, Department of Health and Environmental Control, State
747 Forestry Commission, South Carolina Department of Transportation and South Carolina
748 National Guard.
749
750 County Emergency Response Agencies include: Sheriff's Offices, Fire Departments,
751 Emergency Medical Services and Emergency Management Offices.
752
753 City and Town Emergency Response Agencies may include: Police Departments, Fire
754 Departments, Rescue Squads and Emergency Management Offices.
755
756 Other Emergency Response Agencies in South Carolina include: Federal Bureau of
757 Investigation, Alcohol, Tobacco and Firearms, Drug Enforcement Agency, U. S. Forest
758 Service, U.S. Coast Guard, U.S. Civil Air Patrol, American Red Cross, and Amateur Radio
759 RACES/ARES.

760   ## 2.1.3 UASI Areas/TIC Plans

761
762   There are only two TIC Plans that impact South Carolina, the Charleston, SC Urban Area
763   and the Charlotte, NC Urban Area. Information on these plans is shown below (Table 1, 2
764   and associated graphics).

765
766   **UASI Areas/TIC Plans**

767
768   **Table 1 Charleston, SC Tri-County Area Tactical Interoperable Communications Plan**

Designated Metro Area	Regions / Jurisdictions	TICP Title/ Completion Date	POC Name	POC Email
Charleston, South Carolina Urban Area	COUNTIES Berkeley Charleston Dorchester CITIES Charleston Goose Creek Hanahan Isle of Palms North Charleston TOWNS Bonneau Folly Beach Harleyville Lincolnville Moncks Corner Mt. Pleasant Ridgeville St. George Jamestown St. Stephens Sullivans Island Summerville	Tactical Interoperable Communications (TIC) Plan for the Charleston, South Carolina Tri-County Area Dated May 2006 TIC Plan exercise was conducted on June 8, 2006.	Laurent Britton Chuck Reynolds, City of Charleston	lbritton@charlestoncounty.org reynoldSC@ci.charleston.SC.us

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GREENVILLE

PICKENS

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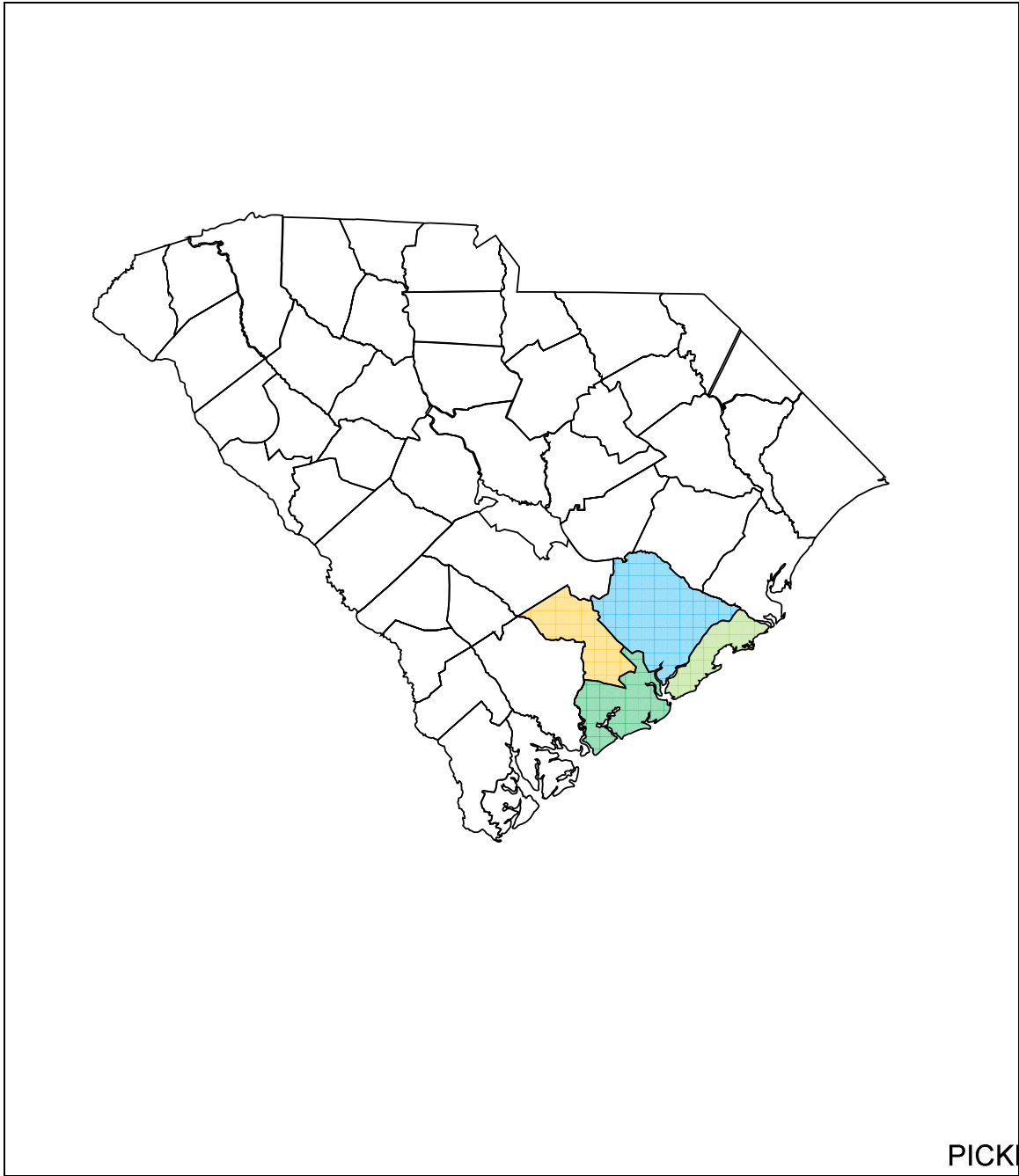
783   **Table 2 Charlotte Urban Area Tactical Interoperable Communications Plan**

Designated Metro Area	Regions / Jurisdictions	TICP Title/ Completion Date	POC Name	POC Email
Charlotte Urban Area and Anson County, NC	NORTH CAROLINA Anson County Cabarrus County Catawba County Gaston County Iredell County Lancaster County Lincoln County Stanly County Union County	Charlotte UASI TICP July 25, 2006	Deputy Chief David Duffy Christina Parkins	dduffy@ci.charlotte.nc.us cparkins@ci.charlotte.nc.us
		Validated by HLS Sept. 2006	Deputy Chief David Duffy	dduffy@ci.charlotte.nc.us
	SOUTH CAROLINA Lancaster County York County		Christina Parkins	cparkins@ci.charlotte.nc.us

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Charlotte Urban Area
Tactical Interoperable Communications Plan

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819

2.2   Participating Agencies and Points of contacts

As stated earlier, South Carolina has had a statewide interoperability plan for 800 MHz in place since the late 1990's. The plan has been integrated into our hurricane evacuation plans; it is used at university football games, special events, political debates and hazmat responses such as the Graniteville train derailment in 2005. This interoperability plan has become part of South Carolina's standard operating procedure for mutual aid communications.

South Carolina has had in-place for years a method to promote, review and coordinate interoperability plans. In South Carolina today 71% of the population is served by law enforcement agencies that utilize the Palmetto 800 Network or Local Government 800 MHz radio systems. All 46 County Sheriff's offices have 800 MHz radio equipment and all but six city police departments have 800 MHz equipment (6 city police department declined to accept the 800 MHz equipment offered by the State). Also much of the population is served by fire services and emergency medical services that utilize these 800 MHz systems. Because of this, the Palmetto 800 User's Group (May 16, 2007 meeting)(refer to Exhibit 5), South Carolina 800 MHz Trunking Advisory Committee (May 16, 2007 meeting) and the Local Government Communications Association (July 19, 2007 meeting) all voted to continue to use South Carolina's existing statewide 800 MHz interoperability plan as the basis of South Carolinas submission to DHS for its Statewide Communications Interoperability Plan. While many UHF and VHF users utilize 800 MHz for mutual aid and command and control, further plans need to be developed to ensure that UHF and VHF users are, or have access to be, interoperable.

The Palmetto 800 Network users hold bi-annual meetings each year. The most recent meetings were held on May 16, 2007 and November 7, 2007. All of the Palmetto 800 users, local government 800 MHz users, VHF users and UHF users are all invited to attend the Statewide User's Group Meeting. The South Carolina 800 MHz Trunking Advisory Committee meets every other month and the Local Government Communications Association meets once a quarter.

The input of our local users was important because it indicates that South Carolina has a successful interoperability plan in-place that the users across the State feel comfortable with. The five member planning team that attended the SCIP workshop earlier 2007 in California consisted of the following: Charleston County Communications (Private 800 MHz system), City of Greenville (Palmetto 800 MHz), State Law Enforcement Division (Palmetto 800 MHz), South Carolina Department of Public Safety (Palmetto 800 MHz), and the State Chief Information Office (designated as the lead for interoperable communications in the state). Although no agencies were individually interviewed for the plan, planning sessions were held with the Palmetto 800 User's Group, the South Carolina 800 MHz Trunking Advisory Committee (refer to Exhibit 2) and the Local Government Communications Association (refer to Exhibit 3)). While agencies whose utilize 800 MHz provided significant input, future plans include obtaining input from those agencies that still primarily use VHF and UHF frequencies. The Division of the State Chief Information Officer, which is also the Administrator of the South Carolina Statewide Trunked 800

866 MHz Radio System (Palmetto 800 Network), gathered most of the data. To achieve
867 statewide input and comments, regional meetings were held with each of the Regional
868 CTCCs. These meeting were attended by 800 MHz, VHF, and UHF users from state/local
869 communications and were multi-discipline in nature (fire, law enforcement, EMS, private
870 energy companies, emergency management, government administration, and federal and
871 state partners).
872
873 The Division of the State Chief Information Officer, Wireless Section, has been tasked
874 with the development and management of the statewide plan.

875   2.3   Statewide Plan / Implementation Point of Contact
876
877 George Crouch
878 Wireless Manager
879 Division of the State Chief Information Officer
880 4430 Broad River Road
881 Columbia, SC 29210
882 (803) 896-0367 office
883 (803) 896-0098 fax
884 gcrouch@cio.SC.gov
885
886 Mr. Crouch is a full-time employee of the State of South Carolina, but has other Public
887 Safety Communications Responsibilities as part of his job duties and he is not operating as
888 the full time interoperability coordinator.
889
890 The South Carolina Legislature does not convene until January 2008. The State CIO has
891 submitted a request in its 2008/2009 budget request to provide full time personnel support
892 to the overall implementation of the strategic initiatives of the PSIC grant and the
893 Statewide Communications Interoperability Plan. Currently agencies are supporting this
894 project using existing personnel and budgets to support the PSIC and SCIP initiative.
895

896   2.4   Scope and Timeframe
897 The scope of South Carolina's SCIP is to continue the development of the Palmetto 800
898 Network system's statewide interoperable communications capability while enhancing its
899 ability to provide interoperability solutions with VHF, UHF and the local government 800
900 systems users. South Carolina's Plan must also manage the available capacity of the radio
901 systems negative system effects while improving and enhancing interoperability solutions.
902 South Carolina believes the key to effective interoperability solutions is preplanning,
903 management, training and relationship building. South Carolina continues to support its
904 standards-based radio system (SmartZone® statewide radio system), the Palmetto 800
905 Network, that was started in 1992 and will continue to encourage agencies to participate in
906 the system. The State realizes that all agencies can not afford to equip every first responder
907 with a radio that has access to the statewide system. South Carolina's goal is to at least
908 have that level of interoperability at the Incident Command Level. The State, through its
909 cache of equipment, gateways and the Emergency Communications and Interoperability

910 Response Team, will attempt to provide the necessary equipment any agency may be
911 lacking. The plan proposes technology enhancements to the existing interoperability
912 capabilities that, with sufficient funding, will be completed in three years. The current
913 version of this plan is set for a three year period to coincide with Public Safety
914 Interoperable Communications (PSIC) funding. This SCIP will be a living document and
915 will be updated as technology advances and strategic initiatives are achieved.
916
917 South Carolina's interoperability solutions and plans must be incorporated into daily
918 events, operations and emergency responses. The minimum goals of interoperability are to
919 establish interoperability at the NIMS command and control level. The use of
920 interoperability channels or talkgroups is recommended to establish on-scene coordination
921 and tactical operations. Interoperability should use established interoperability talkgroups
922 or channels and not dispatch channels. Agencies are encouraged to continue to build
923 working relationships and local interoperability solutions for the agencies they interact
924 with.
925
926 While gateways will be used as a temporary tool when interoperability talkgroups or
927 channels are not available, gateway connectivity to trunked systems must be closely
928 monitored and used as only a last resort. The preferred method for gateway use is South
929 Carolina's conventional repeater network. The plan proposes enhancements to the existing
930 gateway capabilities that, with sufficient funding, will be completed in three years.
931
932 While the state maintains a cache of communications equipment for major disasters and
933 catastrophic events, this cache needs to be expanded in order to serve a greater number of
934 agencies. The plan proposes an increase in the cache of interoperable communications
935 equipment that, with sufficient funding, will be completed within two years.
936
937 South Carolina realizes the importance of an accurate database of public safety radio
938 systems, frequencies and radios. This database is necessary for the planning of additional
939 migration to 800 MHz and the implementation of narrowbanding for the VHF and UHF
940 users. The plan proposes to utilize The Communication Assets Survey and Mapping Tool
941 (CASM) for the gathering and storing of this data. With sufficient funding this will be
942 completed within three years.
943
944 This plan focuses on enhancing/expanding the statewide Palmetto 800 network, other 800
945 MHz systems, ensuring that responders are equipped with advanced technology that will
946 utilize the 700 MHz spectrum, and addressing other identified communication issues
947 within high risk areas. The Charleston Area, which was also designated for the TICP, will
948 also be a key focus area of this plan.

949

3 METHODOLOGY

3.1 Multi-Jurisdictional Input

South Carolina has utilized a collaborative methodology in the development of the statewide plan. The core participants were members of the Counter Terrorism Coordination Council (CTCC) (refer to Exhibit 1), the South Carolina 800 MHz Trunking Advisory Committee (refer to Exhibit 2) and the Local Government Communications Association (refer to Exhibit 3). The members of these groups represent state and local government law enforcement, fire service, emergency medical service and emergency management agencies. Private and cooperative power utilities are also represented. Additional input was provided by federal agencies and non-governmental organizations including the American Red Cross, Amateur Radio ARES/RACES, Civil Air Patrol, South Carolina Sheriff's Association and the South Carolina Telephone Association. A draft copy of South Carolina's Plan was distributed to the various communications committees and Counter Terrorism Coordinating Councils across the state for review and comments during October and November of 2007.

The planning process included the review of previous assessments, existing interoperability plans and procedures, on-going interoperability efforts and meetings with the Local Government Communications Association, the South Carolina 800 MHz Trunking Advisory Committee, the Palmetto 800 User's Group, the State's Interoperability Committee (the ad-hoc committee of multi-discipline, multi-jurisdictional communication experts that drafted the original SCIP) and regional CTCC meetings. Drafts of plan sections were provided to all participating agencies for input.

Meetings were held in the four CTCC Regions (refer to Exhibit 7) throughout the months of October and November. Representation from prevention, response, and recovery disciplines as well as political, industry, volunteer, non-governmental organizations; local and regional representatives were invited to attend. In these meetings, key players solicited interoperability problem inputs and potential solutions consistent with the State's Homeland Security Strategic plan, the State's SCIP, and the PSIC Grant Guidance.

All PSIC grant proposals were reviewed and prioritized by representatives from the Office of the Chief Information Officer, the State Interoperability Committee, the State Counterterrorism Coordinating Council, and the SAA. The State's Interoperability Plan will be updated as required and shall be consistent with the State's Homeland Security Strategy.

The highest priority proposals—those optimizing interoperable communications at the least cost, consistent with State's Homeland Security Strategic Plan, the State's Interoperability Plan, and the Public Safety Interoperable Communications Grant Guidance, will be submitted to the SAA for funding in priority order. The SAA selected these proposals for funding in accord with guidance from the State's CTCC.

36

993 As one of the US East Coast hurricane prone states South Carolina began developing a
994 statewide interoperability plan in 1998. This plan has continued to grow and be utilized
995 through out South Carolina for the last nine (9) years. As part of the statewide
996 interoperability plan South Carolina also settled on a statewide technology platform that
997 would allow for the rapid deployment of assets across the state while supporting the
998 interoperability plan. With over forty thousand 800 MHz radios in service today, South
999 Carolina's significant transition to the 800MHz radio band and the maturity of the South
1000 Carolina statewide radio system known as the "Palmetto 800 Network", South
1001 Carolina's efforts in interoperability planning have been focused on its 800 MHz radio
1002 platform. Input for this planning was provided by the State's Counter Terrorism
1003 Coordinating Council, the Division of State Chief Information Officer, the Palmetto 800
1004 User Advisory Committee, the Palmetto 800 User's Group and the Local Government
1005 Communications Association which represents the eight (8) local government owned and
1006 operated 800 MHz radio systems. While many UHF and VHF users utilize 800 MHz for
1007 mutual aid and command and control, further plans need to be developed to ensure that
1008 UHF and VHF users are, or have access to be, interoperable.
1009
1010 Public safety agencies in South Carolina will benefit from the SCIP through enhanced
1011 interoperability coverage, expanded cache of communications equipment, the inventory
1012 and assessment of VHF and UHF systems, continued training and communications
1013 oriented exercises. The CASM efforts and Communication Planners, requested to
1014 implement this SCIP, will be involved in the "plan to plan" for 800 MHz migration. More
1015 than one of the privately owned 800 MHz systems has expressed interest in joining the
1016 Palmetto 800 Network. Also, as UHF and VHF radios transition to narrowband, it is
1017 expected that more agencies will be transitioning to the Palmetto 800 Network.
1018
1019 Participants will stay involved moving forward by participating in the collaborative efforts
1020 of the State's Counter Terrorism Coordinating Council (CTCC) (refer to Exhibit 1), the
1021 Regional CTCC's (refer to Exhibit 1), the Division of the State Chief Information Officer
1022 (CIO), the South Carolina 800 MHz Trunking Advisory Committee (refer to Exhibit 2), the
1023 Palmetto 800 User's Group (refer to Exhibit 5) and the Local Government
1024 Communications Association (refer to Exhibit 3) through their regularly scheduled
1025 meetings.

1026

3.2 Continuing Input and Support

1028 The planning participants will participate in periodic plan reviews, updates and additions.
1029 This will be accomplished through their regular committee meetings, special meetings,
1030 user group meetings and web site information. The Palmetto 800 Network Users Group
1031 holds bi-annual meeting each year (one in the fall and one in the spring). All users of the
1032 Palmetto 800 Network users, local government 800 MHz users, VHF users and UHF users
1033 are all invited to attend the Statewide Users Group Meeting. The Palmetto 800 MHz User
1034 Advisory Committee meets every other month and the Local Government
1035 Communications Association meets once every four months.
1036

3.3 Incorporation of the Tactical Area Interoperable Plans

1038 The Charleston, South Carolina Tri-County Area Tactical Interoperable Communications
1039 Plan and the Charlotte, North Carolina Urban Area Tactical Interoperable Communications
1040 Plans were reviewed to ensure that the Statewide Communications Interoperability Plan
1041 aligned with and supported the elements of these TIC Plans. Priority was given to these
1042 areas to ensure that needs were addressed. The South Carolina SCIP fully supports the Tri-
1043 County Area TICP in the utilization of common 800 MHz conventional tactical channels
1044 and the sharing of the Palmetto 800 Network Mutual Aid Talkgroups. The SCIP supports
1045 the Charlotte TICP in the swapping of radios, utilization of common 800 MHz
1046 conventional tactical channels and the use of gateways. A gateway device, a Motobridge®,
1047 has been funded under the Homeland Security Grant Program to address communication
1048 interoperability within the Charlotte UASI and the States of North Carolina and South
1049 Carolina. This Motobridge® may also be utilized to connect the Palmetto 800 to other 800
1050 MHz systems within the state.
1051

3.4 Implementation Strategy

1053 Implementation of the Interoperable Communications Plan throughout South Carolina will
1054 require a collaborative statewide effort. The governance structure that will be used to
1055 support implementation efforts, the State CTCC, consists of State Agencies, County
1056 Governments and Municipal Governments that are located throughout the State of South
1057 Carolina.
1058
1059 The State has a history of supporting nongovernmental organization's interoperable
1060 communications needs through the Palmetto 800 Mutual Aid Talkgroups, Law
1061 Enforcement Mutual Aid Talkgroups, Utility Mutual Aid Talkgroups and the 800 MHz
1062 mutual aid channels. Users with access to these mutual aid channels include private
1063 medical helicopters, private hospitals, private ambulance services, utility companies as
1064 well as the National Guard and federal agencies. Under the South Carolina Emergency
1065 Operations Plan, when required for interoperability, the Civil Air Patrol, Amateur Radio
1066 RACES/AREAS and other nongovernmental agencies may be provided 800 MHz radios
1067 from the State's cache in order to support disaster missions. Other nongovernmental
1068 organizations may be issued 800 MHz radios when required for communications

1069 interoperability in support of large scale special events and other activities. Power utility
1070 representatives serve on the Palmetto 800 User Advisory Committee and all state, local,
1071 federal, power utility, law enforcement, emergency medical service and fire services are
1072 invited to attend and participate in the bi-annual user's group meetings. Nine power utility
1073 providers and eight federal agencies already participate in the Palmetto 800 Network.
1074
1075 There are no tribal government entities in South Carolina with public safety or first
1076 responder responsibilities.
1077
1078 South Carolina, like many other states, is frequency challenged in the UHF and VHF
1079 bands. South Carolina continues to search for UHF and VHF frequencies that could be
1080 utilized in developing regional mutual aid channels. Since the National VTAC channels are
1081 only radio to radio direct, South Carolina plans to explore the possibility of installing
1082 National UTAC repeaters and utilizing these in some areas of the State for interoperability.
1083 Our concern is that this does little to address our VHF fire service users. This is one of the
1084 critical reasons that South Carolina has support to populate the CASM tool through PSIC
1085 grant funds. The Division of the State CIO serves as the APCO frequency coordinator for
1086 South Carolina and is attempting to identify and license interoperability frequencies in the
1087 VHF and UHF bands which will be part of the South Carolina SCIP. These frequencies
1088 will be incorporated into this plan.
1089
1090 The Palmetto 800 Network serves as South Carolina's primary platform for
1091 interoperability specifically because frequencies are available to develop a statewide
1092 interoperability system. 800 MHz infrastructure is already in place and today over 500
1093 different agencies in South Carolina and Georgia including State, County, City, Fire, EMS,
1094 emergency management, Power Utilities and nine Federal Agencies participate in the
1095 existing 800 MHz platform of radio users across South Carolina. The Statewide
1096 Communications Interoperability Plan has been developed around its existing plans that
1097 have been in place since 1999. The committees and system users feel that our existing 800
1098 MHz interoperability plan works very well and has already been programmed into over
1099 40,000 of our radios statewide. Statewide interoperability classes utilizing our existing
1100 plans are already being taught through the Criminal Justice Academy and these plans have
1101 been exercised regularly during special events and real disaster. The South
1102 Carolina existing plan has proven to be efficient and effective since inception. This plan
1103 has been expanded to incorporate PSIC guidelines, and therefore expand statewide
1104 interoperability. Policy makers are currently aware of this plan as it had been circulated
1105 and briefed to the Regional CTCCs, the State CTCC, and the Palmetto 800 Advisory
1106 Committee.

1107

4 CURRENT STATEWIDE ASSESSMENT

1108
1109

1110 The assessment of South Carolina's current communications and interoperability
1111 environment included the 2006 Interoperable Communications Assessment, the analysis of
1112 users by radio band (VHF, UHF, 800 MHz), the analysis of 800 MHz conventional
1113 channels and repeaters, the analysis of the Interoperability Frequency Plan, the capabilities
1114 of the local government 800 MHz trunked systems, the TICP Scorecard, and the
1115 capabilities of the Palmetto 800 Network. Also reviewed were the governance structure,
1116 standard operating procedures, training and exercises and usage.
1117

1118 In 2006 an assessment was made of the interoperable communications capabilities of each
1119 major state agency and each county in South Carolina. These assessments revealed a
1120 significant need for improvement in the following areas:
1121

1122 ▪ Assistance in acquisition of equipment and services for participation in the statewide
1123   standards-based shared radio system
1124 ▪ Development of interoperability SOPs for Fire and EMS services
1125 ▪ Development of local interoperability plans
1126 ▪ Development of local interoperability agreements and SOPs
1127 ▪ Development of Command and Control Policies
1128 ▪ Acquisition of redundant, secure and fault tolerant communications systems
1129 ▪ Interoperability and maintenance funding
1130 ▪ Continuity of Communications Plans
1131 ▪ Training on interoperability communications equipment
1132 ▪ Emergency response plans management structure compliance with NIMS
1133 ▪ Inclusion of VHF and UHF users in interoperability planning and coordination
1134 ▪ Inclusion of VHF and UHF users in the governance structure
1135

1136   In the past year progress has been made in some of these areas.
1137

1138 First responders in South Carolina use various means of communication but primarily
1139 VHF, UHF and 800 MHz radios. While law enforcement has made a significant shift to
1140 800 MHz in recent years, the majority of Fire and EMS services continue to use the VHF
1141 or UHF frequency bands. One reason for this is that the majority of fire fighters and some
1142 EMS responders are volunteers and the cost to acquire 800 MHz radios and obtain 800
1143 MHz service continues to be a financial barrier for many users.
1144

1145 The use of 800 MHz mutual aid talkgroups and mutual aid conventional channels is the
1146 primary means of interoperability in South Carolina. These 21 mutual aid talkgroups and
1147 10 conventional mutual channels are programmed into most, if not all, of the over forty
1148 thousand 800 MHz radios that utilize the statewide Palmetto 800 Network or one of the
1149 eight local government trunked radio systems. An additional 10 mutual aid talkgroups are
1150 available for law enforcement agencies. These 800 MHz talkgroups and channels allow
1151 for cross-discipline and cross-jurisdiction interoperability.

In South Carolina 95% of law enforcement agencies, 35% of fire departments, 50% emergency medical services and 100% of Emergency management agencies have direct access to the statewide 800 MHz radio system or 800 conventional repeater system for interoperability. An even larger number have 800 MHz interoperability access through command vehicles, radio caches and dispatch centers. The exact number of agencies with indirect access is not known. The majority of these agencies continue to utilize their VHF or UHF frequencies for their primary dispatch channel and utilize 800 MHz for interoperability and command and control.   An 800 MHz base station has been installed in each of the primary 911 Centers in the 46 counties in the state to provide these agencies with basic interoperability with those agencies who utilize 800 MHz. An 800 MHz base station has also been installed in each county Emergency Operations Center. County Sheriff Departments, City Police Departments and County Coroners have been issued 800 MHz portable radios. EMS operators have been issued one hundred sixty 800 MHz mobile radios and one hundred 800 MHz portable radios. All county hospital emergency rooms have been equipped with 800 MHz base stations for patient coordination and emergency communications. Thirteen fire departments along hurricane evacuation routes have been issued 800 MHz portable radios. All of the above radios operate on the Palmetto 800 Network and have access to the Palmetto 800 Mutual Aid Talkgroups as well as the International and South Carolina 800 MHz tactical interoperability channels. Agencies utilizing VHF and or UHF systems can connect to the 800 MHz network via a gateway device; or, some agencies utilize 800 MHz for mutual aid/command and control only. In order to fully assess the UHF and VHF use throughout the state, a database, such as CASM, is needed.

Also, to provide conventional 800 MHz interoperability in each county, 800 MHz repeaters have been installed at eighty-nine sites statewide. These are available to first responders for interoperability at incidents and they also may be used for special events that require interoperability.

The State maintains a cache of 200 portable 800 MHz radios 25 VHF radios and 25 UHF radios for temporary assignment as needed for disaster response and special events.

To help reduce the first responder subscriber costs for the Palmetto 800 Network, in July of 2007 the State Legislature provided funding that will reduce these costs by 33%. Grants will also be made available to the local government 800 MHz systems to assist them with Palmetto 800 Network interoperability.

South Carolina's interoperability challenges include funding for the purchase of interoperable equipment and funding to cover recurring cost like maintenance. As a home rule state, each political subdivision in South Carolina is allowed to individually determine the level of interoperability they wish to participate in. Like other States, South Carolina faces the challenges of a variety of disparate system in UHF, VHF and 800 across the state.

1195
1196
1197 **Current Interoperability Initiatives**
1198
1199   ▪ South Carolina is working with the State of North Carolina to provide
1200   communications interoperability through the use of consoles in North Carolina that
1201   will be linked to the Palmetto 800 Network and the exchange of radio IDs between
1202   systems.
1203   ▪ South Carolina is exploring the use of bridge technology to link between various
1204   systems for interoperability. Linking capability is currently being initiated to link
1205   the Palmetto 800 Network with the State of Georgia gateway.
1206   ▪ A project to provide portable 800 MHz repeater systems to designated fire
1207   departments is underway. These will be utilized to restore service if the
1208   conventional fixed 800 MHz mutual aid repeaters are out of service due to a
1209   disaster.
1210   ▪ The Palmetto 800 Network continues to expand its coverage and user base. Two
1211   new sites are under construction and subscriber units are being added at an average
1212   rate of 100 per month.
1213
1214 **South Carolina Council of Governments**
1215
1216 In 1967, South Carolina Governor Robert E. McNair signed legislation dividing the state
1217 into ten official planning districts, marking the birth of the Palmetto State's Councils of
1218 Governments (COGs). The Council of Governments has become a valuable resource for
1219 area local governments in the areas of public administration, planning, information systems
1220 and technology, grants, workforce development and services to the elderly population.
1221 While assistance to local government remains as the Council's first priority, the private
1222 sector also benefits from services designed to enhance the region's economic environment.
1223 These efforts include public/private partnerships in support of economic development,
1224 economic research and analysis, and small business lending programs.
1225
1226 In the 1970's, the COG planning districts became the basis for the VHF and UHF law
1227 enforcement radio plan for mutual aid communications (refer to Exhibit 8). This system
1228 included a base station in every Sheriff Department and some Police Departments. Where
1229 needed for coverage, repeaters were installed and maintained by the South Carolina
1230 Highway Department. However, due to the migration of many law enforcement agencies
1231 to 800 MHz, their utilization decreased and continued maintenance could not be justified.
1232 A few of the repeaters remain in service today for station to station interoperability and are
1233 utilized by those local agencies who continue to use VHF and UHF frequencies.
1234
1235 **Cross Discipline Coordination**
1236
1237 All of the Palmetto 800 Mutual Aid Talkgroups and the State's conventional 800MHz
1238 mutual aid channels/repeaters are available for cross discipline utilization. This cross
1239 discipline use often occurs during exercises, large scale special events, major accidents and
1240 disasters. When needed, each discipline can be assigned a separate talkgroup with a

1241 common talkgroup assigned for command and control activities. Coordination for the
1242 assignment of mutual aid talkgroups is performed by the State Warning Point. Cross-
1243 discipline coordination is emphasized in the communications interoperability training
1244 classes which are available to all users regardless of which spectrum they utilize.
1245
1246 **Region 37 (South Carolina) 700 MHz Regional Planning Status**
1247
1248 The Region 37 Chairperson for 700 MHz planning is:
1249
1250 Mr. William Winn
1251 Beaufort County Emergency Management
1252 wwinn@bcgov.net
1253 843-470-3100
1254
1255 Two organizational meetings have been held and the bylaws and technical committees
1256 formed. The bylaws committee chairperson has completed a draft of the bylaws and will be
1257 presenting it to the full committee at the next meeting.
1258 The technical committee is waiting on FCC guidelines for the new 700 MHz channel plan
1259 and will proceed with their planning when the guidelines are made available.
1260
1261 **800 MHz Rebanding**
1262
1263 The State of South Carolina has completed its PFA (Planning Funding Agreement)
1264 negotiations with Sprint/NEXTEL and is currently getting signatures on the documents
1265 from the licensees that share the South Carolina Statewide Radio System with the State,
1266 including Augusta, GA. Most of the eight (8) local government 800 MHz radio systems
1267 have completed their PFA's and are moving forward with the planning phase.
1268
1269
1270 **Narrow-banding**
1271
1272 Private land mobile radio (LMR) systems, including state and local public safety systems,
1273 use blocks of radio spectrum called channels. Historically, LMR systems have used 25
1274 kHz-wide channels. In December 2004, the Federal Communications Commission
1275 mandated that all private LMR users operating below 512 MHz move to 12.5 kHz
1276 narrowband voice channels and highly efficient data channel operations by January 1,
1277 2013. This migration complements a National Telecommunications and Information
1278 Administration mandate for more rapid Federal agency migration to 12.5 kHz narrowband
1279 operation by January 1, 2008. The earlier Federal deadline affects State and local FCC
1280 licensees that interface or share frequencies with federal radio systems.
1281
1282 To phase in the migration deadline of January 1, 2013, the FCC has established interim
1283 deadlines. The first important deadline is January 1, 2011, after which:
1284 The FCC will not grant applications for new voice operations or applications to expand the
1285 authorized contour of existing stations that use 25 kHz channels. Only narrowband
1286 authorizations will be granted. The FCC will prohibit manufacture or importation of new

1287   equipment that operates on 25 kHz channels. This will reduce the availability of new
1288   equipment for legacy radio systems and will affect how agencies maintain and upgrade
1289   older systems.
1290
1291   To prepare for the migration, South Carolina public safety agencies should begin assessing
1292   their radio systems and planning for replacements or upgrades. They should inventory their
1293   current equipment to ascertain what can be converted to 12.5 kHz and what will need to be
1294   replaced before January 1, 2013. Most new equipment has the capability for both 25 kHz
1295   and 12.5 kHz operation because any VHF/UHF radio equipment accepted by the FCC after
1296   February 14, 1997 had to have 12.5 kHz capability. The 12.5 kHz narrowband equipment
1297   is available in both conventional analog FM and digital formats (such as Project 25), so
1298   narrowband conventional FM systems will be compliant. Local governments should
1299   develop contingency plans to accommodate system changes for both public safety and
1300   nonpublic safety systems.
1301
1302   To assist agencies with the inventory and assessment of their VHF and UHF radio systems,
1303   the SCIP proposes to use funds from the PSIC grant to help local agencies populate data
1304   into the CASM, train and use a contractor or temporary personnel to assist with the input
1305   of local and state agency data into CASM and to make an assessment of the VHF and UHF
1306   narrowbanding problems and possible solutions.
1307
1308   Although a complete database of frequencies utilized throughout the state is not available,
1309   data was collected for County Primary Dispatch Radio Bands (see Table 3). Although
1310   Table 3 is sorted by population, there is not a consistent use of VHF, UHF, or 800 MHz for
1311   radios. Table 4 provides percentages of the information as depicted in Table 3. 800 MHz
1312   (either Palmetto 800 or Local Government 800 MHz) is utilized by 42 % of county public
1313   safety agencies utilize for their primary dispatch channel. Law Enforcement is the primary
1314   user of 800 MHz while Fire and EMS primarily utilize VHF for dispatch. However, the
1315   larger cities utilize 800 MHz for both Law Enforcement and Fire Dispatch (many cities
1316   utilize County EMS).
1317
1318   As described earlier within this plan, the state utilizes the national VTAC and UTAC
1319   channels and the state has licensed addition VTAC and UTAC for state mutual aid use.
1320   Table 5 depicts the Interoperability Frequency Plan for the state. This plan is promoted via
1321   statewide training classes and is available on the CIO's website.
1322
1323
1324

Table 3 County Primary Dispatch Radio Bands
Sorted by Population

COUNTY	Est. Pop. July 1, 2005	LAW DISPATCH	FIRE DISPATCH	EMS DISPATCH
Greenville	407,383	PAL800/UHF	VHF	UHF
Richland	340,078	PAL800	PAL800	PAL800
Charleston	330,368	LGR800	LGR800	LGR800
Spartanburg	266,809	PAL800	VHF	PAL800
Lexington	235,272	PAL800	PAL800	PAL800
Horry	226,992	LGR800	LGR800	LGR800
York	190,097	LGR800	LGR800	LGR800
Anderson	175,514	PAL800	VHF	VHF/PAL800
Berkeley	151,673	PAL800	VHF	VHF
Aiken	150,181	PAL800	UHF	PAL800
Beaufort	137,849	LGR800	LGR800	LGR800
Florence	131,097	LGR800	LGR800	LGR800
Pickens	113,575	PAL800	VHF	VHF
Dorchester	112,858	PAL800	VHF	PAL800
Sumter	105,517	LGR800	LGR800	LGR800
Orangeburg	92,167	PAL800	VHF	PAL800
Laurens	70,293	PAL800	VHF	VHF
Oconee	69,577	UHF	VHF	VHF
Greenwood	67,979	UHF	VHF	VHF
Darlington	67,346	PAL800	VHF	VHF
Lancaster	63,113	VHF	VHF	VHF
Georgetown	60,983	PAL800	PAL800	PAL800
Kershaw	56,486	VHF	VHF	VHF
Cherokee	53,844	UHF	VHF	VHF
Chesterfield	43,435	PAL800	VHF	VHF
Colleton	39,605	UHF/PAL800	VHF	VHF
Newberry	37,250	UHF	VHF	VHF
Williamsburg	35,395	PAL800	PAL800	VHF
Marion	34,904	UHF	VHF	VHF
Clarendon	33,363	PAL800	VHF	VHF
Chester	33,228	PAL800	VHF	VHF
Dillon	30,974	PAL800	VHF	VHF
Union	28,539	VHF	VHF	VHF
Marlboro	28,021	UHF	VHF	VHF
Abbeville	26,133	PAL800	VHF	PAL800
Edgefield	25,528	UHF	VHF	VHF
Fairfield	24,047	PAL800	VHF	VHF
Barnwell	23,345	UHF	VHF	VHF

Jasper	21,398	PAL800	PAL800	PAL800
Hampton	21,329	UHF	VHF	VHF
Lee	20,638	PAL800	VHF	VHF
Saluda	18,895	UHF	VHF	VHF
Bamberg	15,880	PAL800	VHF	VHF
Calhoun	15,100	UHF	VHF	VHF
Allendale	10,917	PAL800	VHF	VHF
McCormick	10,108	PAL800	PAL800	PAL800

1329
1330

Table 4 Public Safety Agencies
<u>Primary Frequency Band Usage</u>

800 MHz - 42%	**UHF – 20%**	**VHF – 38%**

<u>Counties</u>

	<u>**800 MHz**</u>	<u>**UHF**</u>	<u>**VHF**</u>
LAW	**24 Counties 52%**	**18 Counties 39%**	**4 Counties 9%**
FIRE	**10 Counties 22%**	**1 County 2%**	**35 Counties 76%**
EMS	**14 Counties 30%**	**1 County 3%**	**31 Counties 67 %**

<u>Cities above 20,000 Population</u>

	<u>**800 MHz**</u>	<u>**UHF**</u>	<u>**VHF**</u>
LAW	**8 Cities 53%**	**4 Cities 27%**	**3 Cities 20%**
FIRE	**8 Cities 53%**	**4 Cities 27%**	**3 Cities 20%**

<u>Primary Frequency Band by Population Served</u>

	<u>**800 MHz**</u>	<u>**UHF**</u>	<u>**VHF**</u>
All	**57%**	**11%**	**32%**
Law	**71%**	**25%**	**4%**
Fire	**42%**	**4%**	**54%**
EMS	**54%**	**2%**	**44%**

1368   **Table 5 Interoperability Frequency Plan**

FREQ Subscriber Unit RECEIVE	FREQ Subscriber Unit TRANSMIT	BASE, MOBILE, OR FIXED (CONTROL)	ELIGIBILITY / PRIMARY USE	COMMON NAME

MHz	MHz	FCC 30 MHz Public Safety Band		
39.4600	SIMPLEX	Base-Mobile	Law Enforcement	LLAW1
39.4800	SIMPLEX	Base-Mobile	Fire Proposed	LFIRE2
45.8600	SIMPLEX	Base-Mobile	Law Enforcement	LLAW3
45.8800	SIMPLEX	Base-Mobile	Fire	LFIRE4
42.1000	SIMPLEX	Base-Mobile	Any Public Safety Eligible	LTAC101
42.2600	SIMPLEX	Base-Mobile	Any Public Safety Eligible	LTAC102
47.5000	SIMPLEX	Base-Mobile	Any Public Safety Eligible	LTAC103

MHz	MHz	FCC 150 - 162 MHz Public Safety Band		
155.7525	SIMPLEX	Base-Mobile	Any Public Safety Eligible	VCALL10
151.1375	SIMPLEX	Base-Mobile	Any Public Safety Eligible	VTAC11
154.4525	SIMPLEX	Base-Mobile	Any Public Safety Eligible	VTAC12
158.7375	SIMPLEX	Base-Mobile	Any Public Safety Eligible	VTAC13
159.4725	SIMPLEX	Base-Mobile	Any Public Safety Eligible	VTAC14
154.2800	SIMPLEX	Base-Mobile	Fire	VFIRE21
154.2650	SIMPLEX	Base-Mobile	Fire	VFIRE22
154.2950	SIMPLEX	Base-Mobile	Fire	VFIRE23
154.2725	SIMPLEX	Base-Mobile	Fire	VFIRE24
154.2875	SIMPLEX	Base-Mobile	Fire	VFIRE25
154.3025	SIMPLEX	Base-Mobile	Fire	VFIRE26
155.3400	SIMPLEX	Base-Mobile	EMS	VMED28
155.3475	SIMPLEX	Base-Mobile	EMS	VMED29
155.4750	SIMPLEX	Base-Mobile	Law Enforcement	VLAW31
155.4825	SIMPLEX	Base-Mobile	Law Enforcement	VLAW32
155.9550	SIMPLEX	Base-Mobile	Any Public Safety Eligible	VTAC111
155.1600	SIMPLEX	Base-Mobile	Any Public Safety Eligible	VTAC112
155.5350	SIMPLEX	Base-Mobile	Any Public Safety Eligible – South Carolina Region 3	VTAC113
155.5500	SIMPLEX	Base-Mobile	Any Public Safety Eligible – South Carolina Region 6	VTAC114
155.0100	SIMPLEX	Base-Mobile	Any Public Safety Eligible – South Carolina Region 8	VTAC115
155.0700	SIMPLEX	Base-Mobile	Any Public Safety Eligible – South Carolina Region 9	VTAC116

1369
1370
1371

MHz	MHz	FCC 450 - 470 MHz Public Safety Band		
453.2125	458.2125	Fixed-Mobile	Any Public Safety Eligible	UCALL40
	SIMPLEX	Base-Mobile		UCALL40D
453.4625	458.4625	Fixed-Mobile	Any Public Safety Eligible	UTAC41
	SIMPLEX	Base-Mobile		UTAC41D
453.7125	458.7125	Fixed-Mobile	Any Public Safety Eligible	UTAC42
	SIMPLEX	Base-Mobile		UTAC42D

453.8625	458.8625	Fixed-Mobile	Any Public Safety Eligible	UTAC43
	SIMPLEX	Base-Mobile		UTAC43D
460.2500	465.2500	Fixed-Mobile	Any Public Safety Eligible – South Carolina Region 1	UCALL141
	SIMPLEX	Base-Mobile		UCALL141D
453.4500	458.4500	Fixed-Mobile	Any Public Safety Eligible – South Carolina Region 2	UTAC142
	SIMPLEX	Base-Mobile		UTAC142D
460.0500	465.0500	Fixed-Mobile	Any Public Safety Eligible – South Carolina Region 4	UTAC143
	SIMPLEX	Base-Mobile		UTAC143D
453.1500	458.1500	Fixed-Mobile	Any Public Safety Eligible – South Carolina Region 5	UTAC144
	SIMPLEX	Base-Mobile		UTAC144D
460.2500	465.2500	Fixed-Mobile	Any Public Safety Eligible – South Carolina Region 7	UTAC145
	SIMPLEX	Base-Mobile		UTAC145D
460.2750	465.2750	Fixed-Mobile	Any Public Safety Eligible – South Carolina Region 10	UTAC146
	SIMPLEX	Base-Mobile		UTAC146D

1372

CHANNEL Subscriber	CHANNEL Subscriber	BASE, MOBILE, OR FIXED CONTROL	ELIGIBILITY / PRIMARY USE	COMMON NAME
RECEIVE	TRANSMIT			

CHANNEL	CHANNEL	FCC 700 MHz Public Safety Band (TV 63 + 68)		
39-40	999-1000	Fixed-Mobile	Calling Channel	7CALL50
	SIMPLEX	Base-Mobile		7CALL50D
23 - 24	983-984	Fixed-Mobile	General Public Safety Service (secondary trunked)	7TAC51
	SIMPLEX	Base-Mobile		7TAC51D
103-104	1063-1064	Fixed-Mobile	General Public Safety Service (secondary trunked)	7TAC52
	SIMPLEX	Base-Mobile		7TAC52D
183-184	1143-1144	Fixed-Mobile	General Public Safety Service (secondary trunked)	7TAC53
	SIMPLEX	Base-Mobile		7TAC53D
263-264	1223-1 224	Fixed-Mobile	General Public Safety Service (secondary trunked)	7TAC54
	SIMPLEX	Base-Mobile		7TAC54D
119-120	1079-1 080	Fixed-Mobile	General Public Safety Service	7TAC55
	SIMPLEX	Base-Mobile		7TAC55D
199-200	1159-1160	Fixed-Mobile	General Public Safety Service	7TAC56
	SIMPLEX	Base-Mobile		7TAC56D
31 9-320	1279-1280	Fixed-Mobile	Other Public Service	7GTAC57
	SIMPLEX	Base-Mobile		7GTAC57D
303-304	1263-1 264	Fixed-Mobile	Mobile Repeater (M03 Use Primary)	7MOB59
	SIMPLEX	Base-Mobile		7MOB59D
223-224	1183-1184	Fixed-Mobile	Law Enforcement	7LAW61
	SIMPLEX	Base-Mobile		7LAW61D
239-240	1199-1200	Fixed-Mobile	Law Enforcement	7LAW62
	SIMPLEX	Base-Mobile		7LAW62D
143-144	1103-1104	Fixed-Mobile	Fire	7FIRE63
	SIMPLEX	Base-Mobile		7FIRE63D
159-160	1119-1120	Fixed-Mobile	Fire	7FIRE64
	SIMPLEX	Base-Mobile		7FIRE64D
63-64	1023-1024	Fixed-Mobile	EMS	7MED65
	SIMPLEX	Base-Mobile		7MED65D
79-80	1039-1040	Fixed-Mobile	EMS	7MED66
	SIMPLEX	Base-Mobile		7MED66D
279-280	1239-1240	Fixed-Mobile	Mobile Data	7DATA69
	SIMPLEX	Base-Mobile		7DATA69D

1373
1374
1375
1376
1377
1378

CHANNEL	CHANNEL	FCC 700 MHz Public Safety Band (TV 64 + 69)		
681-682	1641-1642	Fixed-Mobile		7CALL70
	SIMPLEX	Base-Mobile	Calling Channel	7CALL70D
657-658	161 7-1 618	Fixed-Mobile	General Public Safety Service (secondary trunked)	7TAC71
	SIMPLEX	Base-Mobile		7TAC71D
737-738	1697-1 698	Fixed-Mobile	General Public Safety Service (secondary trunked)	7TAC72
	SIMPLEX	Base-Mobile		7TAC72D
817-818	1777-1 778	Fixed-Mobile	General Public Safety Service (secondary trunked)	7TAC73
	SIMPLEX	Base-Mobile		7TAC73D
897-898	1857-1858	Fixed-Mobile	General Public Safety Service (secondary trunked)	7TAC74
	SIMPLEX	Base-Mobile		7TAC74D
761-762	1721-1722	Fixed-Mobile		7TAC75
	SIMPLEX	Base-Mobile	General Public Safety Service	7TAC75D
841-842	1801-1802	Fixed-Mobile		7TAC76
	SIMPLEX	Base-Mobile	General Public Safety Service	7TAC76D
937-938	1897-1898	Fixed-Mobile	Other Public Service	7GTAC77
	SIMPLEX	Base-Mobile		7GTAC77D
881-882	1841-1842	Fixed-Mobile		7MOB79
	SIMPLEX	Base-Mobile	Mobile Repeater (M03 Use Primary)	7MOB79D
801-802	1761-1762	Fixed-Mobile	Law Enforcement	7LAW81
	SIMPLEX	Base-Mobile		7LAW81D
857-858	181 7-1 818	Fixed-Mobile	Law Enforcement	7LAW82
	SIMPLEX	Base-Mobile		7LAW82D
721-722	1681-1682	Fixed-Mobile	Fire	7FIRE83
	SIMPLEX	Base-Mobile		7FIRE83D
777-778	1737-1 738	Fixed-Mobile	Fire	7FIRE84
	SIMPLEX	Base-Mobile		7FIRE84D
641-642	1601-1602	Fixed-Mobile	EMS	7MED86
	SIMPLEX	Base-Mobile		7MED86D
697-698	1657-1 658	Fixed-Mobile	EMS	7MED87
	SIMPLEX	Base-Mobile		7MED87D
921-922	1881-1882	Fixed-Mobile	Mobile Data	7DATA89
	SIMPLEX	Base-Mobile		7DATA89D

FREQ Subscriber	FREQ Subscriber	BASE, MOBILE,OR FIXED CONTROL	ELIGIBILITY / PRIMARY USE	COMMONNAME
RECEIVE	TRANSMIT			

MHz	MHz	FCC 800 MHz NPSPAC Band (Post-Rebanding)		
851.0125	806.0125	Fixed-Mobile	Any Public Safety Eligible	8CALL90
	SIMPLEX	Base-Mobile		8CALL90D
851.5125	806.5125	Fixed-Mobile	Any Public Safety Eligible	8TAC91
	SIMPLEX	Base-Mobile		8TAC91D
852.0125	807.0125	Fixed-Mobile	Any Public Safety Eligible	8TAC92
	SIMPLEX	Base-Mobile		8TAC92D
852.5125	807.5125	Fixed-Mobile	Any Public Safety Eligible	8TAC93
	SIMPLEX	Base-Mobile		8TAC93D
853.0125	808.0125	Fixed-Mobile	Any Public Safety Eligible	8TAC94
	SIMPLEX	Base-Mobile		8TAC94D
851.2250	806.2250	Fixed-Mobile	Any Public Safety Eligible	8TAC191
	SIMPLEX	Base-Mobile		8TAC191D
851.6875	806.6875	Fixed-Mobile	Any Public Safety Eligible	8TAC192
	SIMPLEX	Base-Mobile		8TAC192D
852.7750	807.7750	Fixed-Mobile	Any Public Safety Eligible	8TAC193
	SIMPLEX	Base-Mobile		8TAC193D
853.6375	808.6375	Fixed-Mobile	Any Public Safety Eligible	8TAC194
	SIMPLEX	Base-Mobile		8TAC194D
853.9750	808.9750	Fixed-Mobile	Any Public Safety Eligible	8TAC195
	SIMPLEX	Base-Mobile		8TAC195D

1379
Common Channel Names
1381

1382   At the present time South Carolina uses the following channel name format for the
1383   nationwide 800 MHz NPSPAC (National Public Safety Planning Advisory Committee)
1384   calling and tactical channels: ICALL, ITAC1, ITAC2, ITAC3 and ITAC4. For the
1385   statewide 800 MHz tactical channels the state now uses the following format: SCTAC1,
1386   SCTAC2, SCTAC3, SCTAC4 and SCTAC5. These name formats will be changed to
1387   follow the above standard naming format during the 800 MHz rebanding process.
1388
1389   For the VHF and UHF radio bands the standard naming format can be implemented as
1390   radios are purchased or reprogrammed. However, most of this will not be accomplished
1391   until the transition to narrowband is competed.

1392

4.1 Governance

1394

1395 The development and oversight of the plan will be conducted by the State Counter
1396 Terrorism Coordinating Council (CTCC). The CTCC was established via Executive Order
1397 to address Homeland Security Concerns in the State—to include the State's highest
1398 priority concern of interoperable communications. The CTCC is now serving as the
1399 Statewide Interoperability Executive Committee (SIEC).   As a member of the State
1400 CTCC, the Division of the State CIO (a nonpublic safety agency) manages a key aspect of
1401 interoperable communications through its administration of the Palmetto 800 Network. It
1402 is also providing the State's Interoperability Coordinator.   The State CIO is the sole state
1403 agency authorized by the legislature to enter into and manage State communications
1404 contracts.

1405

1406 The South Carolina 800 Network state contract (established in 1992; now the Palmetto 800
1407 Network) created the SC 800 MHz Trunking Advisory Committee, to assist with the
1408 management and governance of the SC Radio System. This committee developed
1409 statewide interoperability plans and procedures--formalized after Hurricane Floyd in 1998.
1410 Since 2002, with the creation of the State CTCC, these committees have provided a
1411 governance structure and have jointly worked together to address statewide interoperability
1412 solutions.   The CTCC and the 800 MHz Trunking Advisory Committee have effectively
1413 been fulfilling the role of the SIEC since 2002. While the formation of these committees
1414 occurred before the PSIC guidelines—which also require a State charter, they have
1415 legislative / state contractual authority to accomplish the PSIC objectives in this Home
1416 Rule state.

1417

1418 The Counter Terrorism Coordinating Council (CTCC) was established under authority
1419 granted in Executive Order 2003-02 issued by the Governor of South Carolina on January
1420 16, 2003. This order directed the South Carolina Law Enforcement Division (SLED) to be
1421 the operational authority and lead state agency for Homeland Security efforts, to include
1422 interoperable communications, and to create task forces or coordinating councils as
1423 deemed appropriate. The mission of the CTCC is to support and advise the State Homeland
1424 Security Advisor (the Chief of the State Law Enforcement Division) to facilitate and foster
1425 cooperation and coordination among various governmental and private entities and
1426 disciplines both statewide and regionally. This is accomplished through following roles
1427 and responsibilities:

1428 ▪ Planning
1429 ▪ Training/exercises
1430 ▪ Determining required resources including equipment and location
1431 ▪ Grant funding recommendations
1432 ▪ Information sharing
1433 ▪ Mutual aid agreements
1434 ▪ Establishing best practices
1435 ▪ Other activities consistent with furthering the counter terrorism effort.

1436   The council was also created to develop a network for assessing capabilities gaps / needs,
1437   determing risk, and distributing federal funds to increase capabilities that reduce the risk.
1438   The State CTCC typically meets on a quarterly basis or additionally as needed. The State
1439   CTCC also has several Committees and Regional Councils which meet on a more regular
1440   basis. The State CTCC along with its Grants Committee has established operating
1441   principles and decision making procedures. These principles and procedures have been in
1442   place to support grant funding since 2003.
1443
1444   Governance Structure and Function of the CTCC: In accord with the State Strategy and
1445   under direction from the SAA, the State Counter Terrorism Coordinating Councils (with
1446   component Regional CTCCs) exists and is composed of discipline and subject matter
1447   experts; political, industry, volunteer and NGO representatives; as well as local, region,
1448   and State representatives. It provides the high-level governance structure concerned with
1449   developing and sharing capabilities Statewide – to include interoperable communications.
1450   In addition, 46 County Needs Assessment Committees composed of the county Sheriff,
1451   Police Chief, Emergency Medical Services Director, Fire Chief, and Local Emergency
1452   Management representative contribute to this at the local level. The Strategy
1453   Implementation Group (SIG) and the associated planning cell leverage the efforts of these
1454   local, regional and State committees to identify, and address capability gaps associated
1455   with communications.   The SIG will track risk reduction / capability improvement /
1456   programmatic progress / resources expended as a function of cost in consultation with
1457   discipline experts (ie, CIO Wireless section using CASM tool, etc.) and with electronic
1458   assessment and management tools to ensure resources are not wasted by duplicative
1459   spending or poor management practices.   Chart 6 below diagrams the interactions of the
1460   key entities mentioned above in addressing interoperable communications for the State.
1461   The CTCC members -- agency leads, political appointees, key industry leaders, Not for
1462   Profit organization leaders, and/or elected officials, were initially appointed by the
1463   Homeland Security Advisor and now cycle in and out of CTCC membership based on their
1464   elected or appointed terms, employment, and approval by the SAA. See Exhibit 1 for a list
1465   of CTCC members and their roles and responsibilities.

Chart 6 The CTCC Governed State Execution Cycle for Interoperable Communications
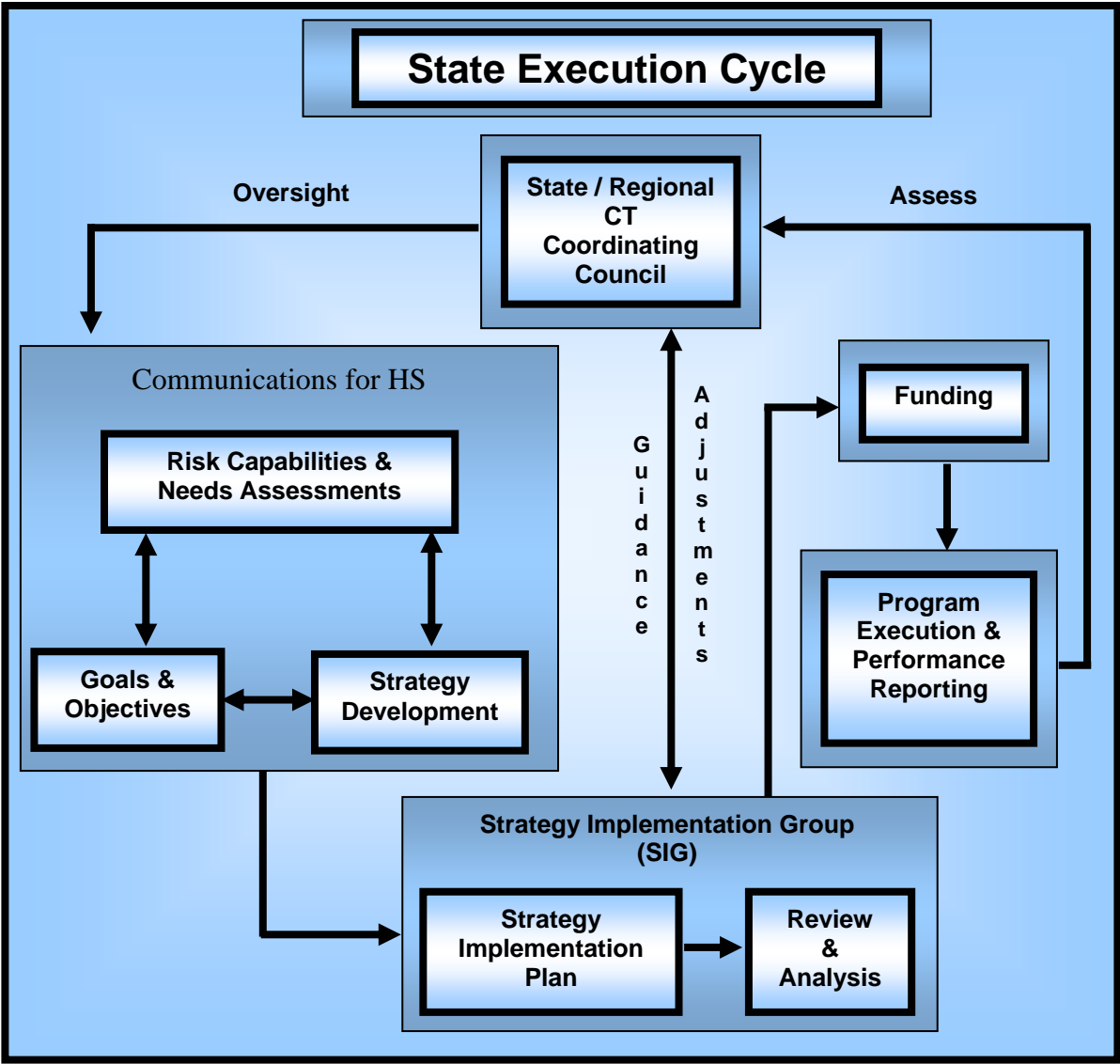
1468 Chart 7 below diagrams how the Strategy Implementation Group (SIG) works with the State and Regional
1469 Counterterrorism Coordinating Councils to assess State interoperable communications capability gaps, drive
1470 relevant State strategy development, and implementation plans.
1471
1472 **Chart 7** Interoperable Communications Strategy Implementation and Evaluation Plan
1473

```
┌─────────────────────────────────────────────────────────────────────┐
│              ┌──────────────────────────────────┐                     │
│              │  Strategy Implementation          │                     │
│              │  & Evaluation Plan                │                     │
│              └──────────────────────────────────┘                     │
│                        ┌──────────────┐                                │
│                        │     SIG      │                                │
│                        └──────────────┘                                │
│                                                                         │
│   ┌──────────────┐    ┌──────────────┐    ┌──────────────┐            │
│   │  Strategy    │    │  Strategy    │    │  State       │            │
│   │  Implementation│  │              │    │  Assessment  │            │
│   │  Plan        │    │              │    │              │            │
│   │              │    │              │    │              │            │
│   │ ▪ Responsibilities│ │ ▪ Vision   │    │ ▪ Risk       │            │
│   │ ▪ Procedures │    │ ▪ Focus      │    │ ▪ Capabilities│           │
│   │ ▪ Measures of│    │ ▪ Goals      │    │ ▪ Needs / Gaps│           │
│   │   Performance│    │ ▪ Objectives │    │ ▪ Mutual Aid │            │
│   │ ▪ Needs      │    │              │    │              │            │
│   └──────────────┘    └──────────────┘    └──────────────┘            │
│                                                                         │
│   ┌──────────────┐    ┌──────────────────────┐    ┌──────────────┐    │
│   │  Milestones  │    │ (4) Regional CT      │    │  Periodic    │    │
│   │              │    │ Coordinating Councils │    │  Internal    │    │
│   │              │    │                      │    │  Reviews     │    │
│   │ ▪ Performance│    │ Key State Agencies   │    └──────────────┘    │
│   │   Schedule   │    └──────────────────────┘                         │
│   │ ▪ Reports    │    ┌──────────┐    ┌──────────────┐                │
│   │              │    │ Revisions│    │  State CT     │                │
│   │              │    │    &     │    │  Coordinating │                │
│   │              │    │ Guidance │    │  Council      │                │
│   └──────────────┘    └──────────┘    └──────────────┘                │
└─────────────────────────────────────────────────────────────────────┘
```

1474   <u>Governance Structure and Function of the State CIO:</u> In addition, as a member of the State
1475   CTCC, the State CIO has additional legislative authority relevant interoperable
1476   communications. Effective July 1, 2007, South Carolina State Legislative Proviso 63.52,
1477   First Responder Interoperability, directs that "the Budget and Control Board, through its
1478   Division of the State Chief Information Officer (CIO), is directed to administer and
1479   coordinate first responder interoperability operations for the statewide Palmetto 800
1480   Network to better coordinate public safety disaster responses and communications." The
1481   Budget and Control Board is required to provide a report on the status of the integration of
1482   the statewide Palmetto 800 Network, which shall include, but not limited, a list of all
1483   entities that are not integrated into the system, as of the end of Fiscal Year 2007-08, and
1484   the reason why they are not integrated.
1485
1486   The State CIO is a key member of the CTCC and the other communications committees
1487   listed throughout this document (the Palmetto 800 Advisory Council, the Local
1488   Government Communications Association, etc.). The collaborative efforts of the CTCC
1489   and the CIO, along with their existing legislative authority places them in a position to
1490   accomplish many of the goals outlined in SCIP. This governance structure and
1491   relationship is indicated in the figure below.
1492

1493
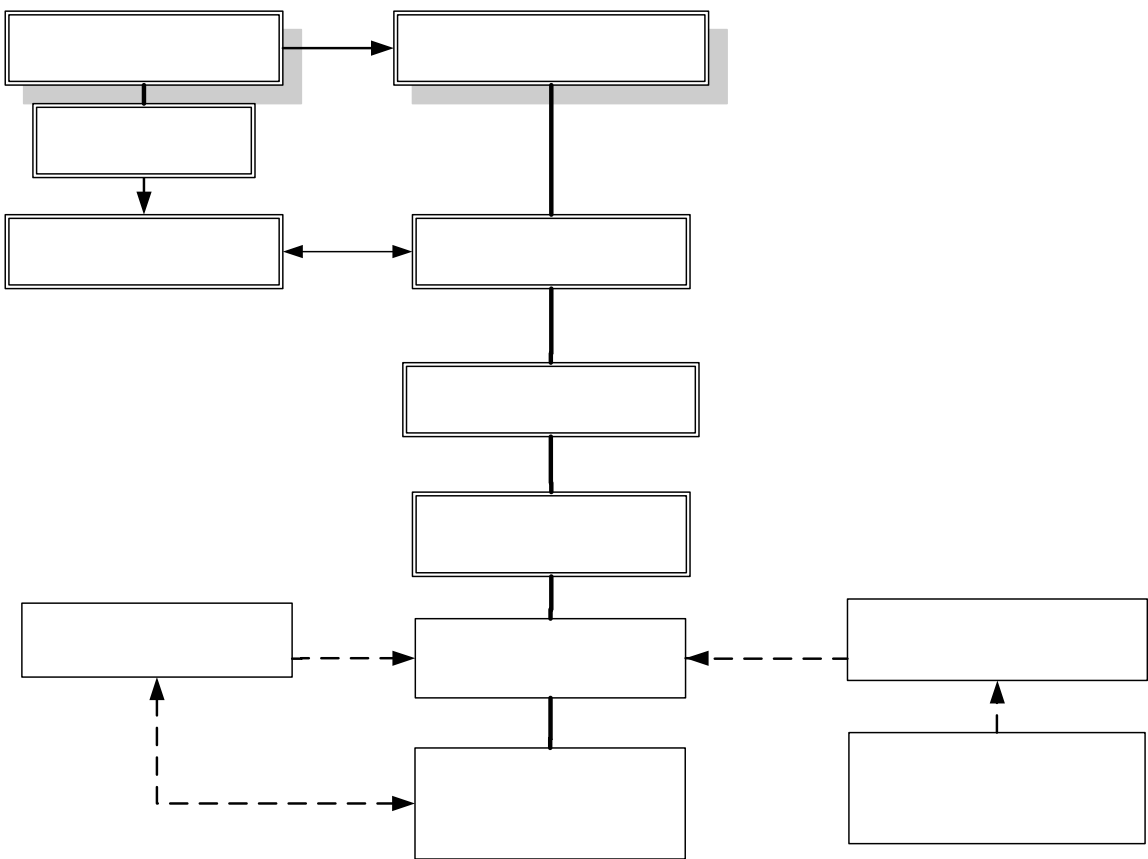
1494
1495 **<u>MOUs</u>**
1496
1497 The following MOUs and procedures are in place for talk groups, channels, and resource
1498 sharing:
1499
1500 1) The 800 MHz User's Agreement. This MOU includes the sharing of frequencies,
1501 talkgroups and infrastructure (69 trunked sites, 89 conventional repeater sites) for 800
1502 MHz Statewide Radio System (Palmetto 800 Network) that includes all 46 counties, 350
1503 agencies, and over 22,000 radio users on 69 sites. The talkgroups include all of the 30
1504 statewide mutual aid talkgroups and 10 channels. The use of gateways and interconnect
1505 devices for VHF and UHF users are defined in this MOU.
1506
1507 2) Mutual Aid and Interoperability Agreement. This MOU provides for the exchange of
1508 10,000 radio system IDs to be shared between 7 local government 800 MHz radio systems
1509 in SC. The MOU also includes the sharing of infrastructure in the event of a radio system
1510 failure of the Palmetto 800 Network or 7 private county radio systems.
1511
1512 3) System Management Agreement. This MOU sets forth standard management and
1513 maintenance agreements for all of the infrastructure users of the Palmetto 800 Network.
1514
1515 4) Talkgroup / Channel Sharing Agreements. These MOUs between the various Palmetto
1516 800 Network users—7 local government 800 MHz radio systems set forth the specific
1517 sharing of talkgroups and channels as required by the Palmetto 800 Network.
1518
1519 **Problem Definition:** Although some authority has been provided via the CTCC and the
1520 CIO to accomplish the goals of the PSIC, South Carolina is a home rule state and cannot
1521 mandate that counties or local jurisdictions participate in the PSIC program by statute. In
1522 particular, although the state has several committees and councils to address 800 MHz
1523 interoperable communication, a formal governance structure is not in place for UHF and
1524 VHF users.
1525
1526 **Solutions:** An effort is being made by the state to establish within state government an
1527 independent telecommunications legislative review committee to review the existing state
1528 laws that relate to communications. This committee will make recommendations back to
1529 the legislature regarding appropriate changes and modifications to existing state laws,
1530 policies and regulations to successfully implement and sustain PSIC.
1531
1532 The State CTCC together with the CIO will join together in the support of a
1533 Communications Subcommittee to the CTCC to further enhance statewide interoperable
1534 communications. To encourage participation in the Palmetto 800 Network, (South
1535 Carolina being a home rule state) the state CIO will work together with the legislature and
1536 the CTCC with respect to grant and legislative funding as has been done in the past. Since
1537 the start of the Homeland Security Grants Program, approximately 12 million dollars has
1538 been administered by the CTCC (in conjunction with the CIO and local governments) and
1539 utilized for interoperable communications, primarily in support of the statewide Palmetto

1540   800 Network. With the help of legislation that was passed in 2007, 33% of recurring costs
1541   and user's fees have been allocated to aid the local and State agencies in their participation
1542   in the Palmetto 800 Network.
1543
1544   For a listing of South Carolina's key committees (The Counter Terrorism Coordinating
1545   Council's Communications Committee, the South Carolina 800 MHz Trunking Advisory
1546   Committee, the Palmetto 800 User's Group and the Local Government Communications
1547   Association) see Exhibits 1-4.
1548

1549   ## 4.2   Technology

1550
1551   As depicted in Chart 8 below, between the statewide Palmetto 800 Network and the eight
1552   local government 800 systems (depicted in the below Graphic 9), there are 106 trunked
1553   repeater sites in South Carolina. These combined systems provide service to over 42,000
1554   public safety, government, private first responder and utility radios. In 2006 a Statewide
1555   capabilities assessment was conducted including every county and all homeland security
1556   metrics associated with interoperable communications—see Section 4.0 for a description.
1557   With the support of the CASM tool, further interoperability information will be gathered
1558   (see Strategic Initiative #5 in section 6.0).
1559
1560   Also discussed in this section is the Palmetto 800 infrastructure and Network coverage
1561   (which is moving to P25 compliance as discussed in the 5.4 Strategic Initiatives section)
1562   statewide mutual aid talkgroups, conventional 800 MHz mutual aid plan, mobile data
1563   coverage, and frequency band usage.
1564
1565   SOPs covering the use of gateways/interfaces with the Palmetto 800 mutual aid talkgroups
1566   have been developed to support VHF/UHF legacy systems under direction of the 800
1567   User's Advisory Committee (see section 4.3).
1568
1569   SC Radio systems will be encouraged to implement a strategy to migrate to a Project 25
1570   (P-25) standards based technology. All future equipment purchased through grant funds
1571   should be P-25 capable or upgradeable. Equipment that is not compatible with the future
1572   growth of the statewide network (P-25) has been removed from the State contract for radio
1573   equipment. Existing equipment will continue to be allowed until the end of its useful life
1574   or FCC regulations mandate replacement.
1575

1576
1577 **Table 6 South Carolina Public Safety 800 MHz Systems**
1578

System	Service Area	Number of Repeater Sites	Number of Agencies Served	Number of Active Radio IDs
STATEWIDE				
Palmetto 800	Statewide	69	350+	22,000 +
COUNTY				
Beaufort 800	Beaufort County	5	80+	2,000
Charleston 800	Charleston County	7	110	6,500
Florence 800	Florence County	4	57	1,900
Horry 800	Horry County	6	65+	1,700
Marion 800	Marion County	3	16	400
Sumter 800	Sumter County	2	4	800
York 800	York County	9	40	2,500
CITY				
Charleston 800	City of Charleston	1	6	4,900
TOTAL		106	726+	42,700

1579

1580
1581 **Chart 8 SC 800 MHz Public Safety Trunked Systems**

1582
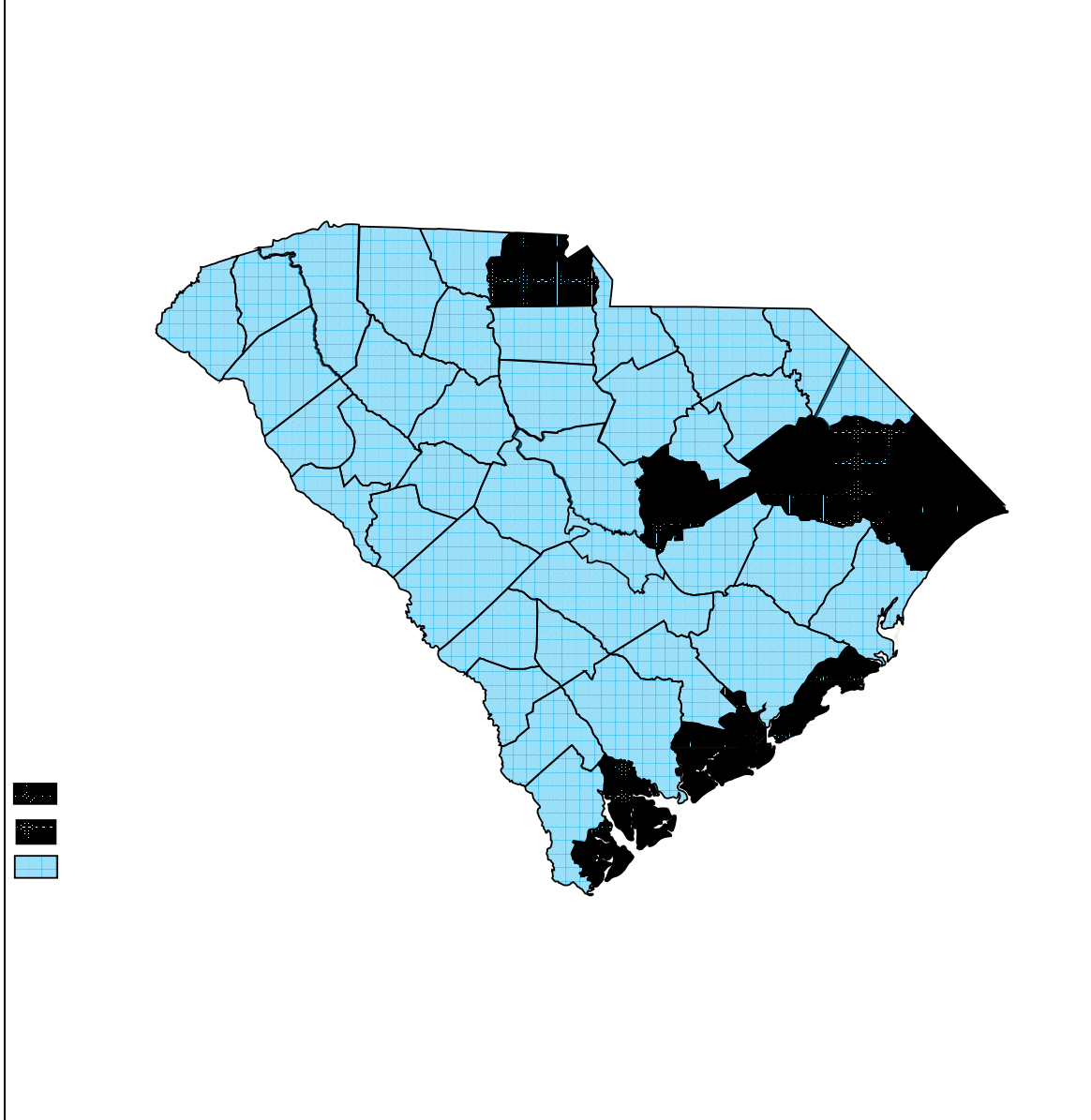
4.2.1 Palmetto 800 Network

1584 The Palmetto 800 Network is a statewide 800 MHz voice and mobile data network that is a
1585 cost sharing public/private partnership between the state government, local governments,
1586 power utilities and Motorola, Inc. The system is a Motorola SmartZone® trunked
1587 system with 69 transmitter sites across South Carolina and Richmond County,
1588 Georgia. The goal of the shared system is to reduce costs and improve interoperability for
1589 all system users.
1590
1591 In operation since 1992, the original state contract was with SCANA Communications (a
1592 subsidiary of South Carolina Electric and Gas Company). In 2001, Motorola purchased
1593 the primary ownership and management of the system under a contract with the Division

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1594   of the State Chief Information Officer (CIO). The Palmetto 800 Network has continued to
1595   grow and today is one of the largest shared statewide public safety radio systems in the
1596   nation with over 22,437 voice users and 1,047 mobile data system users. Chart 11 depicts
1597   the number of Palmetto 800 users at the federal, state, local, and private users.
1598
1599   Over 350 different agencies representing state government, federal government, local
1600   government, law enforcement agencies, fire services, EMS services and power utilities in
1601   South Carolina, North Carolina and Georgia currently participate in this shared statewide
1602   800 MHz radio system. Over 94 percent of South Carolina's population is serviced by
1603   sheriff's departments with access to the Palmetto 800 MHz System. South Carolina
1604   continues to receive top rankings for its interoperability efforts with the statewide shared
1605   public safety system.
1606
1607   **Chart 9 Palmetto 800 Network**

OTHER, 185, 1%
UTILITY, 2,375, 11%
STATE, 5,172, 24%
FEDERAL, 175, 1%
LOCAL, 13,432, 63%

1608
1609   **Users by Type**

1610
Palmetto 800 Network - Mobile Coverage

1611

1612
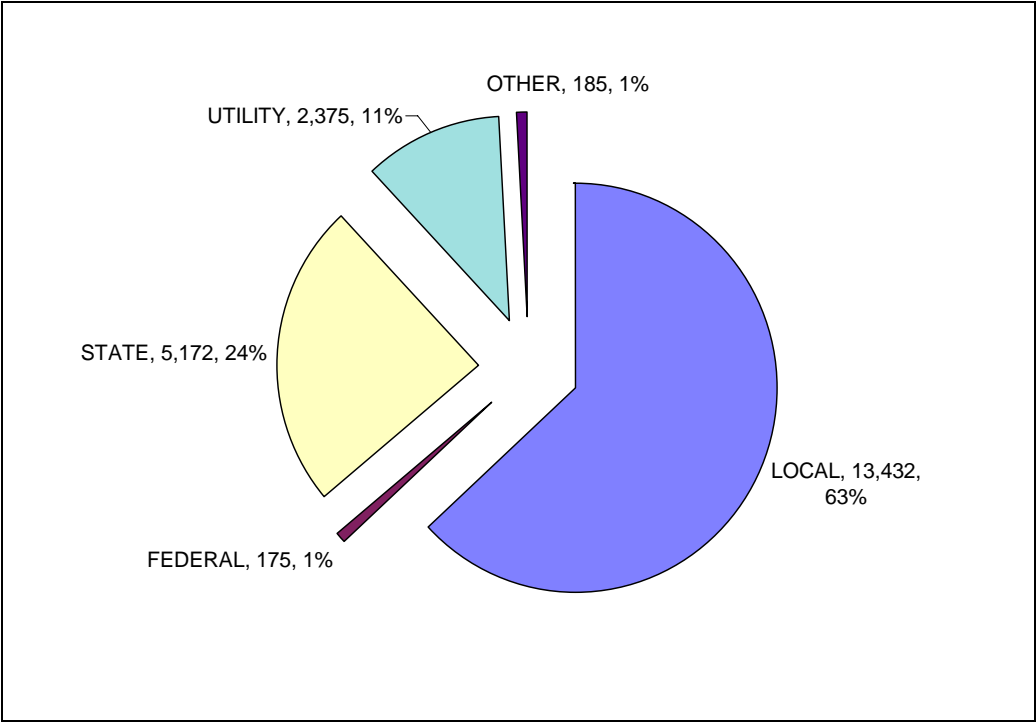
1613 Chart 10 below is a predicted coverage map for the Palmetto 800 Network. System
1614 coverage maps are based on 95% analog predicted coverage. Motorola's contract with
1615 South Carolina requires that system coverage maps be depicted with 95% analog predicted
1616 coverage reliability. Areas shown in white on the coverage maps may still have radio
1617 coverage but the predicted reliability is below 95%.

1618

1619

1620 ## Palmetto 800 Network Mobile Coverage Map

1621

1622 **Chart 10 Palmetto 800 Network – Mobile Coverage**

1623
1624
1625
1626
1627
1628
1629
1630
1631
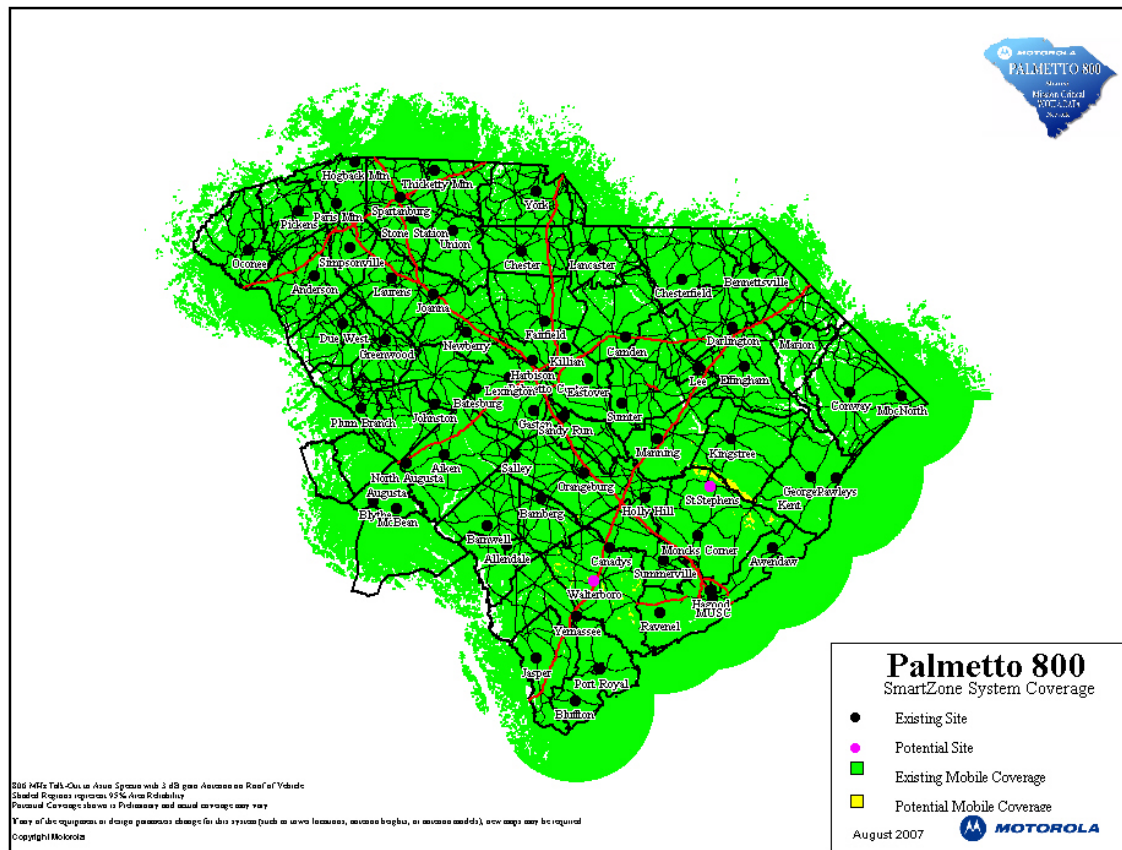
Palmetto 800 Network - Portable Coverage

While the Palmetto 800 Network provides extensive statewide mobile coverage it also provides considerable outside portable coverage as shown in Chart 11 below.

Chart 11 Palmetto 800 Network Outside Portable Coverage map
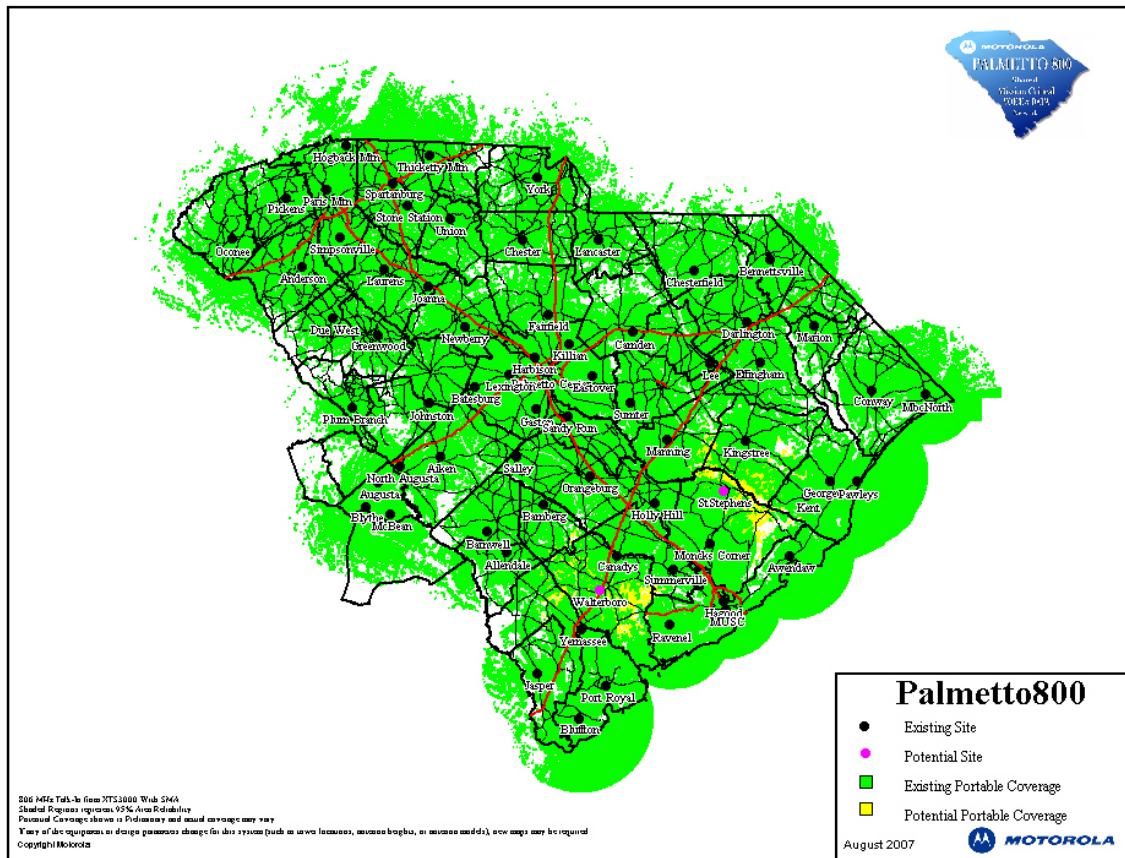
Problem Definition: Although not clearly depicted on the above maps, coverage for the Palmetto 800 system is inadequate in many key areas of the state (Greenville County, Georgetown County, and Jasper County).

Solution: Utilizing PSIC funds, and other grant funds, towers will be erected in Greenville, Georgetown, and Jasper Counties to supply adequate coverage. This will allow users who would like to utilize the Palmetto 800 system, but have not been able to do so because of coverage issues   , the opportunity to do so.

Problem Definition: 800 MHz radios are expensive and therefore many agencies are unable to afford 800 MHz.

Solution: Through the PSIC grant program, and other grant programs, 800 MHz radios will be provided to agencies at highest risk so that they can be on the statewide system.

Palmetto 800 Network - Mobile Data Coverage

1653

1654 The Palmetto 800 Network operates a wide area DataTac 800 MHz mobile data network
1655 with over 1,000 local government and utility mobile data subscribers. The system provides
1656 19.2 kb service for NCIC (National Crime Information Center) queries, CAD (Computer
1657 Aided Dispatch), text messaging etc. Expansion of the system will depend on additional
1658 subscribers and funding for mobile data terminals. The Palmetto 800 Network is currently
1659 installing several new High Performance Data (HPD) transmitter sites in selected locations
1660 around SC. These are P25 compliant.

1661

1662 **Chart 12 Palmetto 800 Network Mobile Data Coverage Map**

1663
1664
1665
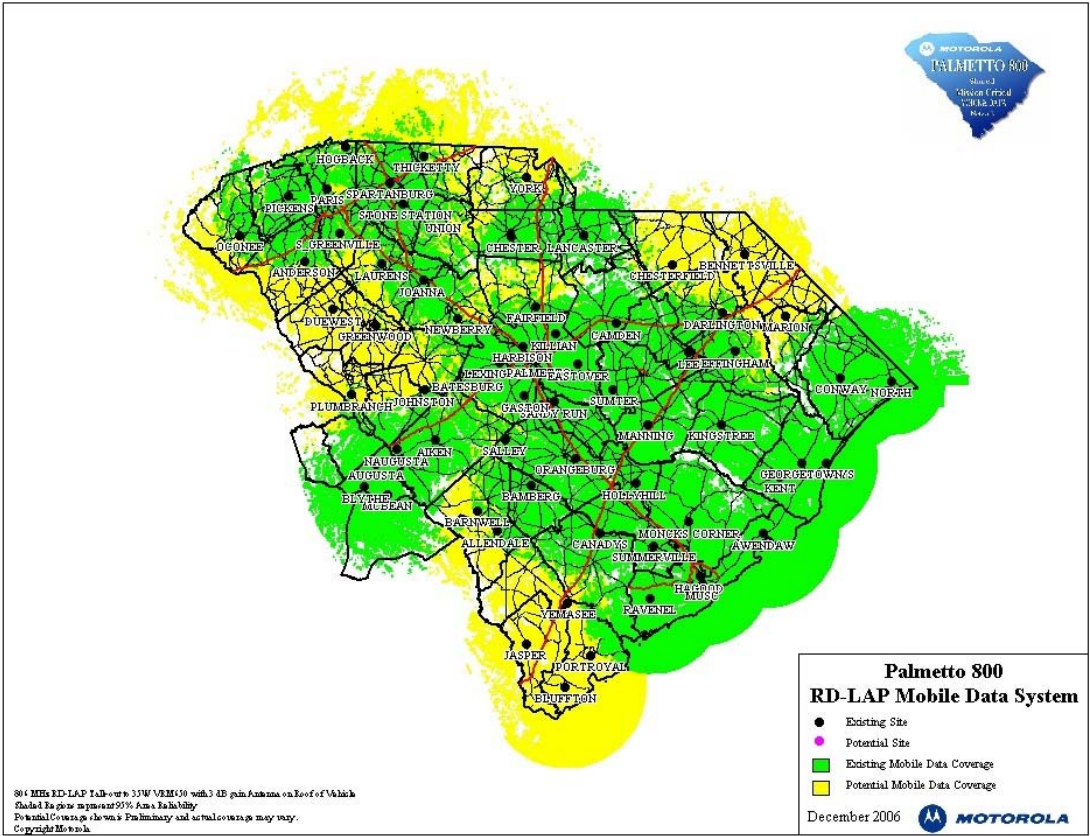
1666 **Palmetto 800 Network – Mutual Aid Talkgroups**
1667
1668 To support statewide interoperability, all users of the Palmetto 800 Network should have
1669 all Regional Mutual Aid, Statewide Mutual Aid, ITAC and SCTAC talkgroups/channels
1670 programmed into their 800 MHz radios, depicted below in Table 7. Law Enforcement
1671 Agencies should also include the Law Enforcement Mutual Aid Talkgroups. These
1672 talkgroups are taught within the interoperability classes conducted statewide and are
1673 available on the CIO's website.
1674
1675 **Table 7 Palmetto 800 Network Mutual Aid Talkgroups**

REGIONAL MUTUAL AID TALKGROUPS	NAME	HP TROOP
CALLING CHANNEL	**SCCALL**	**Statewide**
REGION 1 COMMON *Counties: Richland, Lexington, Kershaw, Lee Sumter, Clarendon*	**SCRG01**	**Troop #1**
REGION 2 COMMON *Counties: Abbeville, Laurens, Greenwood, Newberry, Saluda, Edgefield, McCormick*	**SCRG02**	**Troop #2**
REGION 3 COMMON *Counties: Spartanburg,, Greenville, Anderson, Pickens, Oconee*	**SCRG03**	**Troop #3**
REGION 4 COMMON *Counties: York, Cherokee, Union, Chester, Lancaster, Fairfield, Chesterfield*	**SCRG04**	**Troop #4**
REGION 5 COMMON *Counties: Marlboro, Darlington, Florence, Dillon, Marion, Horry, Georgetown, Williamsburg*	**SCRG05**	**Troop #5**
REGION 6 COMMON *Counties: Colleton, Jasper, Beaufort, Berkeley, Dorchester, Charleston*	**SCRG06**	**Troop #6**
REGION 7 COMMON *Counties: Aiken, Barnwell, Allendale, Hampton, Bamberg, Orangeburg, Calhoun*	**SCRG07**	**Troop #7**
REGION 8 COMMON	**SCRG08**	**Assignable**
REGION 9 COMMON	**SCRG09**	**Assignable**
REGION 10 COMMON	**SCRG10**	**Assignable**

1676
1677

STATEWIDE MUTUAL AID TALKGROUPS	NAME
South Carolina CALLING CHANNEL *Statewide calling channel, monitored by EMD and SHP.*	**SCCALL**
CHANNEL 1 *Pre-assigned for Law Enforcement Operations.*	**SCMA01**
CHANNEL 2 *Pre-assigned for Fire Operations.*	**SCMA02**
CHANNEL 3 *Pre-assigned for EMS Operations.*	**SCMA03**
CHANNEL 4 *Pre-assigned for Command & Control Operations.*	**SCMA04**
CHANNEL 5	**SCMA05**
CHANNEL 6	**SCMA06**
CHANNEL 7	**SCMA07**
CHANNEL 8	**SCMA08**
CHANNEL 9	**SCMA09**
CHANNEL 10	**SCMA10**
South Carolina AIR TO GROUND	**AIR-GRD**
Dynamic Regrouping	**Dyn Reg**

1678
1679
1680
1681
1682
1683
1684
1685

1686
1687

LAW ENFORCEMENT MUTUAL AID TALKGROUPS	NAME	HP TROOP
LAW ENFORCEMENT CALL	LECALL	Statewide
LAW ENFORCEMENT COMMON 1 *Counties: Richland, Lexington, Kershaw, Lee Sumter, Clarendon*	LEC01	Troop #1
LAW ENFORCEMENT COMMON 2 *Counties: Abbeville, Laurens, Greenwood, Newberry, Saluda, Edgefield, McCormick*	LEC02	Troop #2
LAW ENFORCEMENT COMMON 3 *Counties: Spartanburg,, Greenville, Anderson, Pickens, Oconee*	LEC03	Troop #3
LAW ENFORCEMENT COMMON 4 *Counties: York, Cherokee, Union, Chester, Lancaster, Fairfield, Chesterfield*	LEC04	Troop #4
LAW ENFORCEMENT COMMON 5 *Counties: Marlboro, Darlington, Florence, Dillon, Marion, Horry, Georgetown, Williamsburg*	LEC05	Troop #5
LAW ENFORCEMENT COMMON 6 *Counties: Colleton, Jasper, Beaufort, Berkeley, Dorchester, Charleston*	LEC06	Troop #6
LAW ENFORCEMENT COMMON 7 *Counties: Aiken, Barnwell, Allendale, Hampton, Bamberg, Orangeburg, Calhoun*	LEC07	Troop #7
LAW ENFORCEMENT COMMON 8 *Assigned to the Highway 278 Hurricane evacuation route in Beaufort, Jasper, Hampton and Allendale counties.*	LEC08	Special
LAW ENFORCEMENT COMMON 9 *Assignable for special events/emergencies (coordinate with Highway Patrol).*	LEC09	Assignable
LAW ENFORCEMENT COMMON 10 *Assignable for special events/emergencies (coordinate with Highway Patrol).*	LEC10	Assignable

1688
1689 The SCCALL is monitored by the South Carolina Emergency Management Division's
1690 State Warning Point as well as other dispatch centers around the state. The Mutual Aid
1691 Talkgroups are available for use during emergencies or for special events. The use and
1692 assignment of the Mutual Aid Talkgroups is coordinated by the SCEMD's State Warning
1693 Point. Dynamic Regrouping allows Motorola to remotely create or assign a talkgroup to

1694   the Dyn Reg position in the radio. It is highly recommended that this feature be
1695   programmed in to all radios with access to the statewide system. The Law Enforcement
1696   Talkgroups are monitored by the South Carolina Department of Public Safety Dispatch
1697   Centers.
1698

1699   4.2.2   Conventional Mutual Aid 800 MHz Repeater Plan

1700   In order to enhance communications interoperability, provide backup service for 800 MHz
1701   trunked systems and provide alternate 800 MHz service for emergencies and special
1702   events, the state and several counties have installed conventional (non-trunked) 800 MHz
1703   repeaters.
1704
1705   All eligible local, state and federal public safety authorities have access to the shared
1706   public safety conventional 800MHz radio repeaters. Public safety authorities are defined as
1707   entities licensed in the Public Safety Radio Services and the Special Emergency Radio
1708   Service and their federal counterparts. The use of the Mutual Aid Channels in mobile and
1709   portable radios does not require explicit South Carolina Region 37 Committee approval or
1710   FCC licensing, but all usage must be in accordance with FCC rules, the South Carolina
1711   Region 37 Plan and all state and local agreements for use of the channels. Operation of
1712   fixed stations (base, mobile relay, RF control) on the Mutual Aid Channels requires
1713   coordination with the 800 MHz Advisory Committee, South Carolina Region 37
1714   Committee approval and FCC licensing.
1715
1716   The State licensed shared public safety Mutual Aid Conventional 800MHz radio repeaters
1717   utilize one of the five South Carolina Tactical 800MHz frequencies or National Public
1718   Safety Tactical frequencies (Tables 8 and 9).
1719
1720   **Table 8 The South Carolina Tactical (SCTAC) Frequencies**

Name	Mobile Receive	Mobile Transmit
SCTAC 1	866.2250	821.2250
SCTAC 2	866.6875	821.6875
SCTAC 3	867.7750	822.7750
SCTAC 4	868.6375	823.6375
SCTAC 5	868.9750	823.9750

1721

1722   **Table 9 The National Public Safety Tactical Frequencies**

Name	Mobile Receive	Mobile Transmit
ICALL	866.0125	821.0125
ITAC 1	866.5125	821.5125
ITAC 2	867.0125	822.0125
ITAC 3	867.5125	822.5125
ITAC 4	868.0125	823.0125

1723
1724   All shared public safety conventional 800 MHz radio repeaters use a Continuous Tone
1725   Coded Squelch System (CTCSS) of 156.7 Hz for decode and encode. The calling channel
1726   shall not use any means of encryption or other selective signaling techniques.
1727

1728 In major population areas, coastal counties and those counties where both the state and
1729 local government utilizes 800MHz, additional repeaters have been installed so as to
1730 provide multi-channel repeater service. Where possible, county wide mobile coverage
1731 should be provided. Where multiple repeaters are installed in a county, one should be on
1732 the ICALL frequency. This channel should be monitored by a public safety dispatch
1733 center.
1734
1735 The conventional mutual aid repeaters shall not be used for routine daily operations or as
1736 ongoing working channels by any agency (Chart 13). These channels shall be reserved for
1737 inter-agency communications, incidents requiring multi-agency participation and
1738 emergencies. These shall not be used for administrative or intra-agency communications
1739 unless so directed during a major emergency or disaster situation.
1740

1741 ## 800 MHz Repeater Coverage Map

1742
1743 **Chart 13 800 MHz Repeater Coverage Map**

1744
1745
1746
1747

1748

1749   **4.2.3   South Carolina Public Safety VHF and UHF Radio Systems**

1750

1751   While there has been a significant transition to 800 MHz, many agencies in South Carolina
1752   still use VHF or UHF frequencies for their primary dispatch, as depicted in Table 10. To
1753   provide interoperability with 800 MHz users, an 800 MHz base station has been installed in
1754   each primary 911 Center and many law enforcement and emergency medical agencies have
1755   been provided mobile and/or portable 800 MHz radios on the Palmetto 800 Network. All
1756   these radios have access to the Palmetto 800 Mutual Aid Talkgroups and the conventional
1757   mutual aid channels.

1758

1759   **Table 10 SC Public Safety VHF and UHF Radio Systems**

1760

LAW ENFORCEMENT

VHF RADIO BAND FOR PRIMARY DISPATCH

COUNTY	LAW	PAL800 ACCESS
Kershaw County	VHF	YES
Lancaster County	VHF	YES
Union County	VHF	YES

UHF RADIO BAND FOR PRIMARYDISPATCH

COUNTY	LAW	PAL800 ACCESS
Barnwell County	UHF	YES
Calhoun County	UHF	YES
Cherokee County	UHF	YES
Edgefield County	UHF	YES
Greenville County	UHF	YES
Greenwood County	UHF	YES
Hampton County	UHF	YES
Marlboro County	UHF	YES
McCormick County	UHF	YES
Newberry County	UHF	YES
Oconee County	UHF	YES
Saluda County	UHF	YES

1761

1762

1763

FIRE SERVICE

VHF RADIO BAND FOR PRIMARY DISPATCH

County	FIRE	PAL800 ACCESS
Abbeville County	VHF	YES
Allendale County	VHF	YES
Bamberg County	VHF	YES
Barnwell County	VHF	YES
Berkeley County	VHF	YES
Calhoun County	VHF	YES
Cherokee County	VHF	YES
Chester County	VHF	YES
Chesterfield County	VHF	YES
Clarendon County	VHF	YES
Colleton County	VHF	YES
Darlington County	VHF	YES
Dillon County	VHF	YES
Edgefield County	VHF	YES
Fairfield County	VHF	YES
Greenville County	VHF/UHF/800	YES
Greenwood County	VHF	YES
Hampton County	VHF	YES
Kershaw County	VHF	YES
Lancaster County	VHF	YES
Laurens County	VHF	YES
Lee County	VHF	YES
Marlboro County	VHF	YES
McCormick County	VHF	YES
Newberry County	VHF	YES
Oconee County	VHF	YES
Orangeburg County	VHF	YES
Pickens County	VHF	YES
Saluda County	VHF	YES
Spartanburg County	VHF	YES
Union County	VHF	YES

UHF RADIO BAND FOR PRIMARY DISPATCH

County	FIRE	PAL800 ACCESS
Aiken County	UHF	YES

1764
1765

EMERGENCY MEDICAL SERVICES

VHF RADIO BAND FOR PRIMARY DISPATCH

County	EMS	PAL800 ACCESS
Abbeville County	VHF/800 MHz	YES
Allendale County	VHF	YES
Bamberg County	VHF	YES
Barnwell County	VHF	YES
Berkeley County	VHF	YES
Calhoun County	VHF	YES
Cherokee County	VHF	YES
Chester County	VHF	YES
Chesterfield County	VHF	YES
Clarendon County	VHF	YES
Colleton County	VHF	YES
Darlington County	VHF	YES
Dillon County	VHF	YES
Edgefield County	VHF	YES
Fairfield County	VHF	YES
Greenwood County	VHF	YES
Hampton County	VHF	YES
Kershaw County	VHF	YES
Lancaster County	VHF	YES
Lee County	VHF	YES
Marlboro County	VHF	YES
McCormick County	VHF	YES
Oconee County	VHF	YES
Pickens County	VHF	YES
Saluda County	VHF	YES
Union County	VHF	YES
Williamsburg County	VHF	YES

UHF RADIO BAND FOR PRIMARY DISPATCH

County	EMS	PAL800 ACCESS
Aiken County	UHF	YES
Greenville County	UHF	YES

1766
1767   **Counties not shown use 800 MHz**
1768
1769

1770
1771 **Plans for VHF and UHF Systems**
1772
1773 **Problem Definition:** There is not a clear picture of VHF and UHF users in the state. This
1774 hinders interoperability planning. Also, due to narrowbanding, many of the radios
1775 currently on VHF and/or UHF systems will not be operable in two years.
1776
1777 **Solution:** Plans for VHF and UHF systems need to be enhanced. The CASM tool will
1778 allow the state, and local agencies, to better understand the use of VHF and UHF
1779 throughout the state. This will allow both the state and locals to plan for purchasing of new
1780 radios, or transition to an 800 MHz system.
1781
1782 Below are options for VHF and UHF systems.
1783 Option 1)   Migrate to 800 MHz - Requires local funds, state funds and grants.
1784 Option 2)   Remain on VHF or UHF – May require funds for narrowbanding by 2013.
1785 Option 3)   Program the VHF and UHF national and state mutual channels into all
1786   radios – Some radios are single channel only and therefore do not have the
1787   capacity for mutual aid channels.
1788
1789 The State cache of VHF and UHF radio equipment is being expanded to support agencies
1790 that solely rely on VHF and UHF The inventory of VHF and UHF radio systems through
1791 the use of CASM will allow better planning for these systems. After the CASM tool is
1792 populated, an assessment will be performed to identify VHF and UHF interoperability
1793 problems and solutions.
1794

1795

4.3 Standard Operating Procedures

1796

1797

1798 Local governments in South Carolina operate under a "Home Rule" form of government.
1799 The authority for local government is summarized in the State Constitution, Article 8,
1800 section 17, which provides that "all laws concerning local government shall be liberally
1801 construed in their favor. Powers, duties, and responsibilities granted local government
1802 subdivisions by this constitution and by law shall include those fairly implied and not
1803 prohibited by this Constitution." Based on the Home Rule, the State Communications
1804 Interoperability SOP documents are not legislative binding. However, via the Governor's
1805 NIMS compliance declaration and SAA / CTCC administered homeland security grants,
1806 jurisdictions and agencies have obligated themselves to comply with these SOPs to receive
1807 grant funding.

1808

1809 There are mutual aid and system sharing Memoranda of Understanding (MOU) for
1810 interoperability in place between the Palmetto 800 Network users and the eight (8) local
1811 government city/county 800 MHz radio systems. These were implemented in 2000. Each
1812 county and most of the larger cities in South Carolina have signed a statewide mutual aid
1813 MOU with the State of South Carolina. The MOU is all encompassing to include resources
1814 and communications assets. The State continues to encourage local governments to enter
1815 into a Statewide Mutual Aid Agreement for Catastrophic Disaster Response and Recovery.
1816 Communication resources are addressed in this mutual aid agreement. Plans will be
1817 developed for MOU's to cover the use of VHF and UHF interoperability channels.

1818

1819 The existing Communications Interoperability Procedures and Guidelines were developed
1820 to address requirements at all levels of government and all disciplines including Law
1821 Enforcement, Fire Service, Emergency Medical Service, Emergency Management, power
1822 utilities and federal agencies that participate in the South Carolina statewide radio system.

1823

1824 While the State cannot enforce the use of the communications interoperability procedures
1825 in UHF, VHF and 700/800 MHz bands, it promotes their use through training, exercises
1826 allocation of equipment, funding support and the review of after action reports.

1827

1828 Any required communications interoperability 800 MHz SOP changes or additions are
1829 referred to the South Carolina 800 MHz Trunking Advisory Committee's Training and
1830 Interoperability Sub-Committee for action. All recommended changes and additions
1831 require approval by the User Advisory Committee. The Committee members and the state
1832 communications staff work together to stay abreast of processes that may need to be
1833 changed. The State is concerned that many of the federal recommended policy changes are
1834 pushed down to State and local agencies without funding for implementation of the policy
1835 change. Many times this delays compliance for years as these changes are seen as
1836 unfunded mandates.

1837

1838 There are no items in the existing SOP's that conflict with or do not comply with current
1839 standards or statewide initiatives.

1840
1841 **Table 11 Communications Interoperability Procedures for Public Safety Agencies**
1842

SOP Name	Agencies Included	Disciplines Included	SOP Location*	Frequency of Use
Communications Interoperability Procedures for Public Safety Agencies	State and Local Government	Law Fire EMS Emergency Management	CIO Division Fire Academy Law Enforcement Academy Palmetto 800/VHF/UHF Local Govt. Trainers	As needed for training, exercises and incidents.

1843
1844 In September of 2006 the "Communications Interoperability Procedures for Public Safety
1845 Agencies" was distributed (Table 11) and has been used for classroom training throughout
1846 the state. This document was prepared by the Division of the Chief Information Officer,
1847 State Budget and Control Board and was funded by the Department of Public Safety and
1848 the Criminal Justice Academy.
1849
1850 The procedures address the Incident Command System, Incident Communications,
1851 Incident Communications Unit Leader, Incident Communications Plan and Incident
1852 Communications Interoperability Procedures for 800 MHz. While the procedures focus on
1853 800 MHz, much of it is also applicable to other radio bands. Specifics relating to VHF and
1854 UHF interoperability will be included in the SOP after the proposed inventory and
1855 assessment of the radio bands. During the class students develop Incident
1856 Communications Plans (IC205) for various scenarios.
1857

1858 **Table 12 Communications Interoperability Procedures for Palmetto 800 Mutual Aid Talkgroups**

SOP Name	Agencies Included	Disciplines Included	SOP Location*	Frequency of Use
Communications Interoperability Procedures for Palmetto 800 Mutual Aid Talkgroups	State and Local Government	Law Fire EMS Emergency Management	Internet CIO Division Palmetto 800 Local Govt. Trainers	As needed for training, exercises and incidents.

1859
1860 SOPs covering the use of the Palmetto 800 mutual aid talkgroups have been developed
1861 over the years under direction of the User Advisory Committee (Table 12).
1862
1863 All mutual aid talkgroups (Regional, Statewide & Law Enforcement) and mutual aid
1864 conventional repeaters shall not be used for routine daily operations or as ongoing working
1865 channels by any agency. These channels shall be reserved for inter-agency
1866 communications, special or community events, and incidents requiring multi-agency
1867 participation, coordination and emergencies. These shall not be used for administrative or
1868 intra-agency communications unless so directed during a major emergency or disaster
1869 situation.
1870
1871 Several mutual aid talkgroups have been pre-assigned to assist agencies and disciplines
1872 when responding to major disasters (SCMA01 - Law Enforcement, SCMA02 - Fire,
1873 SCMA03 - EMS and SCMA04 - Command and Control).
1874 All use of mutual aid talkgroups or repeaters for special events or emergencies is to be
1875 coordinated with the appropriate agencies.
1876
1877 The SCCALL Channel is monitored by South Carolina Emergency Management
1878 Division's State Warning Point. Mutual Aid Talkgroups SCMA5, SCMA6, SCMA7,
1879 SCMA8, SCMA9 and SCMA10 are available for use during mutual aid incidents or for
1880 special events. The use and assignment of Mutual Aid Channels is coordinated by the
1881 SCEMD, State Warning Point.
1882
1883 These SOPs are available on the Internet at:
1884 cio.SC.gov/councilSCommittees/palmetto800/talkgroupsandchanels.htm.
1885

1886
1887 **Table 13 Communications Interoperability Procedures for South Carolina 800 MHz Mutual Aid**
1888 **Channels and Repeaters**

SOP Name	Agencies Included	Disciplines Included	SOP Location*	Frequency of Use
Communications Interoperability Procedures for the South Carolina Mutual Aid 800 MHz Channels and Repeaters	State and Local Government	Law Fire EMS Emergency Management	Internet CIO Division Palmetto 800 Local Govt. Trainers	As needed for training, exercises and incidents.

1889
1890 SOPs covering the use of the 800 MHz conventional mutual aid channels have been
1891 developed over the years under direction of the User Advisory Committee (Table 13).
1892
1893 **Purpose:** To provide a plan for the implementation of shared public safety Mutual Aid
1894 Conventional 800MHz radio repeaters in South Carolina.

1895 **Objectives:**
1896   a) Maximize the use of existing facilities.
1897   b) Maximize the use of available frequencies.
1898   c) Minimize frequency interference.
1899   d) Provide for the sharing of equipment and sites.
1900

1901 **Benefits:**
1902   a) Provides for improved inter-agency mutual aid communications.
1903   b) Provides backup for 800MHz trunked radio systems.
1904

1905 All eligible local, state and federal public safety authorities shall have access to the shared
1906 public safety conventional 800MHz radio repeaters. Public safety authorities are defined as
1907 entities licensed in the Public Safety Radio Services and the Special Emergency Radio
1908 Service and their federal counterparts.

1909 These procedures are available on the Internet at:
1910 cio.SC.gov/councilSCommittees/palmetto800/mutualaid800repeaterplan.htm
1911

1912
1913 **Table 14 Interconnect Guidelines for Palmetto 800 Primary System Users**

SOP Name	Agencies Included	Disciplines Included	SOP Location*	Frequency of Use
Interconnect Guidelines for Primary System Users	State and Local Government	Law Fire EMS Emergency Management	Internet CIO Division Palmetto 800/UHF/VHF Local Govt. Trainers	As needed for training, exercises and incidents.

1914
1915 Interconnect guidelines (UHF and VHF Users) for the Palmetto 800 Primary System Users
1916 have been developed under the direction of the Palmetto 800 User Advisory Committee
1917 (Table 14).
1918
1919 **Purpose:** To maintain the availability and functionally of the Palmetto 800 Network for
1920 the primary system users.

1921 **Objectives:**
1922   a) Ensure the integrity of the Palmetto 800 Network.
1923   b) Provide interoperability options.
1924   c) Manage system loading.
1925   d) Establish a guideline for the use of interconnects.

1926 **Benefits:**
1927   a) Improve safety.
1928   b) Reduce interference and interconnect technical problems.
1929   c) Provides alternate 800MHz service for special events and emergencies.
1930
1931
1932 These guidelines are available on the Internet at:
1933 *cio.SC.gov/councilSCommittees/palmetto800/primarysystemusersguidelines.htm*
1934
1935

1936
1937 **Table 15 Interconnect Guidelines for non-primary Palmetto 800 Network Users**

SOP Name	Agencies Included	Disciplines Included	SOP Location*	Frequency of Use
Trunked 800 MHz System Interconnect Guidelines	State and Local Government	Law Fire EMS Emergency Management	Internet CIO Division Palmetto 800/UHF/VHF Local Govt. Trainers	As needed for training, exercises and incidents.

1938
1939 Interconnect guidelines (UHF and VHF Users) for non-primary Palmetto 800 Users have
1940 been developed under the direction of the Palmetto 800 User Advisory Committee (Table
1941 15).
1942
1943 **Purpose:** To maintain the availability and functionally of the Palmetto 800 Network for
1944 the primary system users.

1945 **Objectives:**
1946   a) Ensure the integrity of the Palmetto 800 Network.
1947   b) Provide interoperability options.
1948   c) Manage system loading.
1949   d) Establish a guideline for the use of interconnects.
1950
1951 **Benefits:**
1952   a) Improve safety.
1953   b) Reduce interference and interconnect technical problems.
1954   c) Provides alternate 800MHz service for special events and emergencies.
1955

1956 These guidelines are available on the Internet at:
1957 *cio.SC.gov/councilSCommittees/palmetto800/primarysystemusersguidelines.htm*

1958 All of the SOPs discussed above cover Law Enforcement, Fire Service, Emergency
1959 Medical Service and Emergency Management use of the Palmetto 800 mutual aid
1960 talkgroups and the 800 MHz conventional mutual aid channels. They may be implemented
1961 by incident, city, county, region or statewide, depending on the situation. The SOPs listed
1962 above are to support the communications section leader in his decision making process for
1963 implementing a communications plan—ICS-205—at a specific incident.
1964
1965 The Communications Interoperability Procedures are based on the NIMS concepts of
1966 interoperability, reliability, scalability and portability, resiliency and redundancy of
1967 communication systems. The SOPs support the Incident Command System, the use of

1968   plain language, the preparation of an Incident Communications Plan (IC-205) and the use
1969   of Mutual Aid Channels. The assessment of jurisdictional compliance with NIMS is being
1970   done in every county statewide using NIMCAST.
1971
1972   The NIMS training requirements for all first responders and disaster workers in South
1973   Carolina are FEMA IS-700 and ICS-100. Communications Unit Leaders are required to
1974   also complete FEMA IS-800 and ICS-200 and ICS-300. This training is acquired through
1975   classroom training provided by the Criminal Justice Academy, the State Fire Academy, the
1976   Emergency Management Division and some local governments. Certain courses are also
1977   available on the Internet for self paced training.
1978
1979   While those individuals who complete the Communications Interoperability Procedures
1980   training receive a certificate, at this time there is no other provision for the credentialing of
1981   communications personnel. It is South Carolina's under standing that the Department of
1982   Homeland Security (DHS) is developing a Communication Unit Leader certification.
1983   When The National Emergency Responder Credentialing System is available to document
1984   minimum professional qualifications, certifications, training and education requirements
1985   that define the standards required for specific communications functions, South Carolina
1986   will adopt that system for credentialing.
1987
1988   While the Communications Interoperability Procedures training does cover basic
1989   Communications Unit Leader training, additional training needs to be provided based on
1990   the Communications Unit Leader (COML) Core Competencies publication. When the
1991   COML curriculum is published by DHS, it will be incorporated into the Communications
1992   Training Program.
1993
1994   At this time the State does not maintain a listing of personnel who are qualified to staff
1995   Communications Unit functions.
1996
1997   **Problem Definition:** Although there are many SOPs that allow for interoperability, it is
1998   unclear if agencies have developed SOPs for interoperability devices such as gateways.
1999   Although gateways allow for interoperability, incorrectly used, they can hinder
2000   interoperability. Also, there is not a repository of all communication SOPs to ensure that
2001   they do not contradict
2002
2003   **Solution:** As new technology and systems are deployed, new SOPs will be developed to
2004   help insure interoperability is available when needed and is utilized in an effective manner.
2005   Utilizing CASM and other methods, SOPs will be developed and/or enhanced to ensure
2006   effective and efficient use of gateways. The communication planners, along with the
2007   CTCC Communications Committee, will work to identify conflict in various SOPs that
2008   may be at the local level. State level SOPs for communications are coordinated by the
2009   CIO's office.

2010

4.4 Training and Exercises Plan

2011

2012

2013 The State of South Carolina has pursued a coordinated homeland security strategy that
2014 combines enhanced planning, new equipment purchases, innovative training, and realistic
2015 exercises to strengthen the State's emergency prevention and response capabilities.
2016 Training and exercises play a crucial role in this strategy, providing the State with a means
2017 of attaining, practicing, validating, and improving new capabilities. Many of the State's
2018 training and exercise programs are promoted and coordinated by the South Carolina
2019 Emergency Management Division (SCEMD), in coordination with the South Carolina Law
2020 Enforcement Division (SLED), South Carolina Department of Health and Environmental
2021 Control (SC DHEC), SC Department of Public Safety/Highway Patrol (SCDPS/HP) and
2022 numerous county and local emergency response agencies. The schedule is designed to help
2023 prepare the State to optimally address both the natural and technical hazards that it may
2024 face.
2025 A series of formal communications classes are being conducted throughout the state under
2026 the direction of the State CIO's Office. The End User Class covers such topics as: the
2027 hands on use of certain radios, radio features, mutual aid channels and direct (simplex)
2028 mode. The Interoperability Procedures Class focuses on what avenues of communications
2029 could be utilized in the event of an emergency occurring anywhere in the State of South
2030 Carolina. Also covered are the responsibilities of the Communications Unit Leader as
2031 defined by the Incident Command System as well as what additional equipment could be
2032 made available to in an emergency. The target audience for this class is Supervisors,
2033 Department Leaders, Training Officers and anyone who may fill the role of a
2034 Communications Unit Leader. Classes are conducted by a qualified communications
2035 trainer. As of August 31st, 2007, there have been over 80 radio communications and
2036 interoperability classes offered throughout the South Carolina with an attendance number
2037 of over 1,000.

2038

2039 The end user and train the trainer interoperability classes are offered around the state as
2040 requested by local agencies. During the past year several classes a month have been
2041 offered. The announcement and schedule of communications classes is disseminated
2042 though mail outs, emails and the CIO web site. The training is available to all law
2043 enforcement, fire, EMS, health services, medical, emergency management, State agencies,
2044 selected non-governmental organizations, etc. in South Carolina. The training is delivered
2045 by a contract trainer at various sites throughout the state through the SC Criminal Justice
2046 Academy and the Fire Academy.

2047

2048 While no formal process has been utilized for a needs study, this information has been
2049 gathered from end users, the Palmetto 800 User Advisory Committee and the Palmetto 800
2050 User's Group. As part of the Homeland Security Grant Program, capability assessments
2051 were conducted to identify needs/gaps. This assessment has been used to prioritize
2052 communication funding within the state and was utilized for the development of this plan
2053 as well.

2054

2055 Other than the NIMS requirements, no communications specific training standard has been
2056 developed for all first responders including field units, telecommunicators and technicians.
2057 When available from DHS, the Communications Unit Leader training requirements will be
2058 implemented
2059
2060 The Interoperability Procedures Class addresses the basic requirements for the
2061 Communications Unit Leader. The DHS Communications Unit Leader Core Competencies
2062 will be implemented and covered in future classes.
2063
2064 Currently only class attendance is tracked. COML certification requirements, certificate &
2065 IDs, and a process to track COMLs are under study.
2066
2067 At this time communications training incentives are only available to law enforcement
2068 officers. Law enforcement officers receive eight hours of Continuing Education Credit for
2069 attending the Communications Interoperability Procedures Class.
2070
2071 All communications training includes the use of mutual aid channels and talkgroups for
2072 interoperability. The Interoperability Procedures Class also includes having the students
2073 participate in several scenarios which require the preparation of an Incident
2074 Communications Plan (ICS-205). All state level and grant funded exercises have
2075 interoperable communications objectives. At this time no process exists to monitor
2076 objectives for the local government exercises.
2077
2078 The Interoperability Procedures have been utilized for statewide, regional and local exercises
2079 where communications interoperability was required. This is generally coordinated through the
2080 Division of the State Chief Information Officer and the South Carolina Emergency Management
2081 Division.
2082
2083 **Problem Definition**: Although interoperability training classes are offered throughout the state,
2084 attendance is often low. Also, due to lack of training, users are often unable to utilize the full
2085 capacity of the radios.
2086
2087 **Solution:** SCEMD's system of promoting training classes will be utilized to promote
2088 interoperability classes offered by the State CIO Office. By doing such, SOPs will be promoted
2089 and therefore users will understand how to properly become interoperable. Also, users, via the
2090 training classes, will be taught the full capability of their radio.

2091

4.5 Usage

2093
2094 Incident Commanders, Communication Unit Leaders, first responders and dispatchers are
2095 made aware of the interoperability capabilities through classroom and on the job training.
2096 They are encouraged to use interoperability channels when needed for mutual aid
2097 communications.
2098
2099 Frequently local agencies communicate with other local and state agencies by utilizing the
2100 Palmetto 800 Regional Mutual Aid Talkgroups. No scheduling or prior arrangement is
2101 required for this use. For emergencies, disasters and special events agencies request the
2102 use of one or more of the Palmetto 800 Statewide Mutual Aid Talkgroups. This is done
2103 through the State Warning Point. Where appropriate, the South Carolina Mutual Aid
2104 talkgroup can be regionalized to only the affected area.
2105
2106 The assigned Palmetto 800 Regional Mutual Aid Talkgroups are likely used daily for
2107 communications between various agencies at the local and regional level. If the incident
2108 communications requirements exceed this capacity, additional mutual aid talkgroups may
2109 be requested through the State Warning Point. If additional radios, portable repeaters,
2110 portable towers etc. are required, these can be requested from the State CIO's cache of
2111 communications equipment.
2112
2113 There are mutual aid and system sharing MOU's for interoperability in place between the
2114 Palmetto 800 Network users and the eight (8) local government city/county 800 MHz radio
2115 systems. These were implemented in 2000. Each County and most of the larger cities in
2116 South Carolina have signed a general mutual aid MOU with the State of South Carolina.
2117 The MOU is all encompassing to include resources and communications assets. The State
2118 continues to encourage local governments to enter into a Statewide Mutual Aid Agreement
2119 for Catastrophic Disaster Response and Recovery. Communication resources are
2120 addressed in this Mutual Aid Agreement.
2121
2122 The interoperability resources are used for inter-agency communications including both
2123 within and across disciplines. Four of the Palmetto 800 Statewide Mutual Aid Talkgroups
2124 are pre-designated for Law, Fire, EMS and Command & Control. Others may be
2125 designated for Emergency Management, Air Branch, and Logistics etc., as needed. These
2126 talkgroups may be setup for statewide use or regionalized where appropriate. Also
2127 Dynamic Regrouping can be utilized to bring outside agencies onto an existing agency
2128 talkgroup, when that is desired.
2129
2130 The South Carolina Emergency Management Division conducts weekly statewide
2131 communications tests to verify that EMD repeaters and local government equipment is
2132 operational. Communications Interoperability Procedures, end user radio training and
2133 standard radio templates all help ensure that equipment is routinely used to improve day-
2134 to-day interoperability between agencies.
2135

2136 **Problem Definition:** There are three systems primarily utilized throughout the state, UHF,
2137 VHF, and 800 MHz. Although Palmetto 800 has been designated for statewide
2138 interoperability, many agencies still do not have access to Palmetto 800 for command and
2139 control.
2140
2141 **Solution:** Enhancement of Governance, Technology, SOPs, and Training and Exercises
2142 will promote Usage of Palmetto 800 for interoperability throughout the state. Also, the
2143 above will promote interoperability within VHF and UHF systems who do not have access
2144 to Palmetto 800.

5 STRATEGY

In 1999 the South Carolina Public Safety Coordinating Council issued the Statewide Public Safety Communications Report. The report laid out the long term recommendations and strategies for the development of a statewide interoperable communication system shared by all public safety first responders. Many of these recommendations have been accomplished, including: **Implement a Statewide Wireless Communications Network** (Palmetto 800 Network), **Adopt a Multi-Agency Governing Structure** (South Carolina 800 MHz Trunking Advisory Committee), **Form a Communications Systems User Group** (Palmetto 800 User's Group), **Pursue Funding Sources** (state and federal funds have been obtained), **Encourage Creative Solutions to System Development** (Palmetto 800 Network has public and private ownership).

The following vision, mission, goals, objectives and strategic initiatives were developed to support, enhance and expand South Carolina's previous communications interoperability efforts and have been expanded for statewide interoperability to include 800 MHz, UHF, and VHF.

Problem Definitions / Solutions Identified

5.1 Interoperability Vision

South Carolina plans to continue to follow the 2005 State Homeland Security Strategic Plan for interoperability that has been submitted to DHS as part of SC's statewide interoperability plan. The South Carolina vision is to continue to support, enhance and develop an interoperability system that is used to meet agencies daily communications needs and interoperability is available in all responder radios. Pure radio interoperability, coverage and communications cannot be limited by jurisdictions, but are part of the statewide or multi-state network. Agencies, through the State's Mutual Aid Plan, must be able to relocate emergency response personnel and equipment to an affected area anywhere in South Carolina while maintaining communications interoperability across the state. Since South Carolina already has a statewide integrated interoperability system (Palmetto 800 Network) that is compatible with our eight (8) local government trunked 800 MHz systems, Augusta, Georgia (a Palmetto 800 User), the City of Charlotte, North Carolina's 800 MHz system, other North Carolina 800 MHz systems and the North Carolina statewide VIPER 800 MHz radio system, South Carolina plans to continue to develop this existing statewide network.

A part of South Carolina's long term vision is to move the Palmetto 800 Network to a P-25 digital technology platform and develop partnerships with existing 800 MHz systems that wish to integrate into the Palmetto 800 Network. The State's goal is to begin the process of moving to the P-25 platform within the next five (5) years. The Palmetto 800 Network's move to a P-25 trunked platform introduces no new interoperability issues. We will

2188 continue to encourage legacy systems to migrate towards the Palmetto 800 Network in
2189 accord with State statutes, provide radios for swapping, and continue to utilize
2190 interoperability gateways to address interoperability gaps.
2191

5.2 Mission

2193

2194 The Mission of Statewide Communications Interoperability Plan is to enhance and expand
2195 South Carolina's existing collaborative interoperability efforts resulting in the ability of
2196 public safety providers, public service providers and utility providers to exchange incident
2197 essential communications on demand, in real time, utilizing the technologies set forth in
2198 the Interoperability Continuum.
2199

5.3 Goals and Objectives

2201

2202 **Some Key Problems:**
2203 **Lack of coverage and spectrum along the I-85 corridor; as well as lack of 800 MHz**
2204 **Radios.**
2205 The I-85 corridor in the upstate of South Carolina is a key population center and economic
2206 area that has numerous diverse communications systems supporting public safety agencies.
2207 A number of the agencies along the I-85 corridor already have 800 MHz equipment that is
2208 not being fully utilized for daily operations. A lack of coverage and spectrum has been
2209 identified in this area. This additional coverage is needed to support interoperability
2210 associated with special events, high traffic volumes, disaster response etc. In addition, the
2211 equipment and systems within region have been completely documented causing
2212 uncertainty with respect to the size of the communications gaps.
2213

2214 **Lack of coverage in the Garden City – Murrells Inlet area.**
2215 Along this coastal area of South Carolina agencies already utilize 800 MHz technologies
2216 for day to day communications. A lack of coverage has been identified in this area. This
2217 additional coverage is needed to support interoperability associated with special events,
2218 high traffic volumes, increase in population due to tourism and hurricane evacuation.
2219

2220 **Lack of coverage in the Jasper County area.**
2221 Along this coastal area of South Carolina, which includes the I-95 evacuation and
2222 transportation corridor, agencies already utilize 800 MHz technologies for day to day
2223 communications. A lack of coverage has been identified along the I-95 and Highway 278
2224 corridors.
2225

2226 **Solutions:** Expansion of the Palmetto 800 Network infrastructure to include new trunked
2227 sites, towers and assistance in the procurement of additional radios to address these
2228 coverage gaps and needs. Training will be included with Palmetto 800 Network. The
2229 CASM tool will be used to assess and document existing communications systems in use
2230 across the State. Collectively these action will enhance spectrum efficiency as well safety
2231 and security Statewide. These solutions will be detailed in section 6.0.

Goal 1 - Enhance and Expand Statewide Communications Interoperability

South Carolina will prioritize communications solutions based on risk assessments – threat and population densities. Realizing that many interoperability problems exist, the following major interoperability shortfalls have been identified:

1. **Objectives**
    1.1. Evaluate interoperability effectiveness across South Carolina to determine the areas and types of agencies where current interoperability efforts need improvement.
    1.2. Prioritize the areas that need the most assistance in enhancing interoperability or radio coverage. Priority will be based on population effected, economic impact to the State, potential terrorism threat and natural hazards.
    1.3. Optimize available funds, using all funding sources to maximize the results and effect of the interoperability enhancements.
    1.4. Develop policies and contractual programs, compliant with guidance from the Governance and Standard Operating Procedures elements of the Interoperability Continuum that encourage communications service vendors to improve their continuity of service plans, availability of alternate circuits and channels and improved alternate or redundant capability.

Goal 2 - Continue Statewide Infrastructure Enhancement and Expansion
As additional agencies make plans to migrate to the Statewide 800MHz Trunked Radio Network, additional sites, channel capacity and subscriber radios will be required. Continued enhancement and expansion of a statewide radio infrastructure will provide participating agencies and interoperability user's statewide voice and data coverage. The design is to support wide-area interoperability via mobile and portable coverage requirements. Priority will be given to those agencies with matching funds available and 800 MHz trunked radio systems that wish to migrate to the Palmetto 800 Network.

2. **Objectives:**
    2.1. Develop minimum functional requirements.
    2.2. Develop eligibility requirements.
    2.3. Review solutions and areas that provide matching funds.
    2.4. Develop and review solutions that provide spectrum and infrastructure efficiencies in developing partnerships and shared statewide solutions.
    2.5. Review requests and justifications.
    2.6. Develop MOU and distribution plan.
    2.7. Acquire and distribute radio equipment.

Goal 3 - **Enhance Safety and Security**
Enhance responders and the public's safety and security through reliable voice and data communications systems.

3. **Objectives:**
    3.1. Develop standards for annual communications exercises (see goal 7).
    3.2. Continue to provide radio and interoperability training (see training, Goal 6).
    3.3. Continue to work with the South Carolina Legislature to develop polices and funding for the support of statewide interoperability.

Goal 4 - Improve Spectrum Efficiency

4. **Objective:**
    4.1. Share radio system with multiple agencies and service types.
    4.2. Utilize simulcast solutions for spectrum efficiency where affordable and technology is feasible.
    4.3. Promote the use and upgrade of VHF and UHF equipment supporting narrowband channels (mandated for 1/1/2013)
    4.4. Utilize spectrum efficient 700 MHz frequencies when they are made available.
    4.5. Develop plans and strategies that ensure the use of narrowband UHF and VHF national and state mutual aid channels.

Goal 5 - Develop a Database of State and Local Public Safety Radio Systems

5. **Objectives:**
    5.1. Use funds from the PSIC grant to help local agencies populate data into the CASM
    5.2. Train and use a contractor or temporary personnel to assist with the input of local and state agency data into CASM.
    5.3. Make an assessment of VHF and UHF interoperability problems and possible solutions.

Goal 6 - Provided Training for all Supplied Interoperability Equipment.

6. **Objective:**
    6.1. Training is provided to County 911 Dispatch, Emergency Operations Centers (EOC), DPS, and other key coordination nodes on the 800 MHz system(s) and other supplied interoperability equipment in support of the Training element of the Interoperability Continuum.
    6.2. Continue to support interoperability and radio training for all public safety disciplines through the Criminal Justice and Fire Academy.

Goal 7 - Evaluate communications interoperability exercises.
Exercise the use of interoperable communications, in support of the Exercises element of the Interoperability Continuum, in conjunction with other exercises or as stand alone exercises to evaluate progress.

7. **Objectives:**
    7.1. Evaluate interoperable communications in conjunction with ongoing exercises.

2324   7.2. Conduct regular drills to ensure that all communications systems are properly
2325   functioning and utilized.
2326   7.3. Utilize a contractor to develop (2) two communications interoperability exercises.
2327   Consideration should be given to at least one of these exercises one of the
2328   exercises being independent of any other exercise.

2329

2330   Goal 8 – Enhance the State's Cache of interoperable radio equipment.

2331

2332   8. Objectives:
2333   8.1. Expand the State's cache of radios for use during emergencies, disasters, special
2334   events and other events across South Carolina.
2335   8.2. Radios should be fully functional with analog ITACs and SCTACs, SmartZone®
2336   (digital and analog) and P-25 systems.
2337   8.3. Equipment should be both rechargeable and alkaline battery packs.
2338   8.4. Fixed wing State and CAP aircraft assets are to be functionally quipped to support
2339   suitcase style conventional repeaters.
2340   8.5. ESF-2/CIO shall maintain and deploy the State's cash of equipment as needed.
2341   Equipment deployment shall be in coordination the State Emergency Management
2342   and available 7/24/.

2343

2344   Goal 9 – Enhance the development of the existing interoperability
2345   capabilities to support local government interoperability.

2346

2347   9. Objectives
2348   9.1. Review existing interoperability within the CTCC Regions to determine the best
2349   interoperability solutions for the region.
2350   9.2. Schedule regional and local county meeting to discuss current interoperability
2351   capabilities and concurrence with the local agencies in develop of a strategy to
2352   attain their interoperability goals.
2353   9.3. Insure that all interoperability strategies conform with the statewide mutual
2354   strategy

2355

2356   Goal 10—Enhance the governance and interoperability planning.
2357   10.1 Review governance structure within the State and various regions
2358   10.2 Adjust governance structure as appropriate
2359   10.3 Support interoperability planning effort

2360

5.4 Strategic Initiatives

The South Carolina Statewide Communications Interoperability Plan being submitted to the Department of Homeland Security and Department of Commerce is a continuation of the State's existing interoperability plans. Key metropolitan areas in South Carolina that have limited interoperability through the statewide radio system will continue to be our focus for interoperability enhancement.

Governance Enhancements

As part of the strategic initiative SC needs to continue to work on codifying its governance (see Section 4.1) for support of the Statewide Interoperability Plan and the elements of the SAFECOM Interoperability Continuum. The CTCC is serving as the Statewide Interoperability Executive Committee (SIEC) and has approved PSIC grant funds for use by one of its members, the State CIO, to obtain fulltime staff support to help assess, plan and manage interoperable radio and data communications in South Carolina. This is being done due to the CIO's willingness to provide the State's Interoperability Coordinator; the CIO has legislative authority to run the Palmetto 800 Network; and is the sole state agency authorized by the legislature to enter into and manage State communications contracts. Funding support and direction from the Legislature will help further codify fulltime staff support at the CIO for interoperable communications (moving those funded by the PSIC grant from grant funded positions to state fulltime employees) when they meet in 2008.

Technology Initiatives

While the 800/700 MHz band is the only available spectrum that will allow South Carolina to continue to build out the statewide interoperability systems, additional interoperability enhancements need to be done with VHF, UHF and Low Band systems to enhance interoperability. South Carolina will aggressively encourage VHF, UHF and low band public safety radio users to implement and utilize the national interoperability channels for their specific band. The National Public Safety Telecommunications Council (NPSTC) channel naming nomenclature will be required.

Gateway devices will continue to be used as a tool to support interoperability between the various public safety radio bands. Gateways are not considered as permanent solutions to interoperability and must be closely monitored. Gateways while creating limited interoperability do so at the cost of spectrum capacity and efficiency. Where possible, the State's cache of radio equipment will be used to support agency interoperability first. Remembering that South Carolina is a "Home Rule" state, State interoperability goals cannot require agencies to move their primary communication to the Palmetto 800 Network. Our goal is to have all agency senior staff and NIMS sections leaders to have access to the statewide Palmetto 800 system and the statewide conventional repeater network.

Ongoing Interstate Initiatives

The South Carolina Palmetto 800 radio system is directly interoperable with many of our surrounding states radio systems. Recurring funding for these projects are critical to their success. A joint multi-state committee including the states of North Carolina, South Carolina, Georgia and the City of Charlotte, North Carolina needs to be established to address regional east coast interoperability. South Carolina intends to be a catalyst to start this multi-state planning group. Several initiatives/plans are already in the works to enhance interoperability with neighboring States these include;

North Carolina

(1) System Radio ID exchanges – The South Carolina Palmetto 800 Network and the North Carolina VIPER System have already begun to exchange system Radio ID's for interoperability between the two States.

(2) The South Carolina Region 5 Mutual Aid talkgroup has been installed into the North Carolina Highway Patrol dispatch office in Elizabethtown, N.C. to provide direct interoperability for those Counties that border N.C. (Horry, Marion, Dillon and Marlboro). The Elizabethtown project with NC is a test bed project to enhance interoperability with NC. Successful results from the test will be the basis for expanding this project across all of our border counties.

(3) The future plan is to provide interoperability access to all the South Carolina Regional Mutual Aid talkgroups that border North Carolina.

(4) Future 2008 – Develop an interoperability plan between Charlotte, North Carolina and the Palmetto 800 system.

Georgia

(1) Augusta - Richmond County, Georgia is a major user of the Palmetto 800 Network and already has statewide interoperability access to South Carolina.

(2) In South Carolina the Beaufort County 800 System and Jasper County (Palmetto 800 Network) have mutual aid interoperability with the Savannah, Georgia 800 MHz system.

(3) Future 2008 – South Carolina today has limited interoperability with the other areas of Georgia that border South Carolina. Georgia's radio systems are a more diverse and offer a more of an interoperability challenge. South Carolina plans to begin meetings with Georgia in 2008 to look at ways and solutions that can be used to improve interoperability with the other areas of Georgia.

2448
2449 **Ongoing Data Initiatives**
2450
2451 The South Carolina Statewide Palmetto 800 DataTac Mobile Data System does offer
2452 interoperable text messaging at this time. Palmetto 800 mobile data system users have the
2453 capability to text message any other user on the system across the state. The Palmetto 800
2454 DataTac and the county mobile data systems are currently not interoperable. This may be a
2455 future project if funding and recurring dollars become available. The future for mobile data
2456 seems to be moving towards the integrated P-25 voice and data systems that offer more
2457 interoperability solutions for data services.
2458
2459 In June of 2007 the South Carolina Legislature passed a resolution to create the South
2460 Carolina Technology and Communications Study Committee for the purpose of evaluating
2461 the state's broadband communications infrastructure and assessing the availability of and
2462 need for broadband services in un-served and underserved areas within the state. South
2463 Carolina has decided that due to the funding limitations and the State's current on going
2464 planning for a statewide WIMAX data solution, that enhancing the interoperability our
2465 current data system will not be a priority at this time with these new more interoperable
2466 data solutions on the horizon. South Carolina's focus will be on the enhancement of the
2467 voice systems until these new data systems are available. With the rapid development and
2468 technology changes of commercial data systems it appears that new enhanced
2469 interoperability data solutions are on the immediate horizon that will be more cost effective
2470 that expanding the older DataTac systems.
2471
2472 **Catastrophic Loss of Communication Assets**
2473
2474 The South Carolina statewide radio system has a number of levels of redundancy built into
2475 its system and the eight (8) local government county systems that partner together. South
2476 Carolina statewide network actually consist of multiple independent systems:
2477
2478   (1) The Palmetto 800 trunked system (69 sites)
2479   (2) The Statewide Interoperability Repeater System (81 sites)
2480   (3) The Palmetto 800 Data System (32 sites)
2481   (4) The local government city/county 800 trunked systems
2482
2483 Where the local government 800 MHz systems overlay the Palmetto 800 Network, an
2484 additional layer of redundancy is created. Most of the city/county local government 800
2485 trunked systems have also added additional layers of conventional repeaters to enhance the
2486 redundancy of their systems. The Palmetto 800 and 800 MHz City/County systems share
2487 over 10,000 system IDs and infrastructure to enhance redundancy for catastrophic loss of
2488 communications assets.
2489
2490 The Palmetto 800 Network and City/County 800 MHz systems are under contract with
2491 their vendor for support and disaster recovery. The Palmetto 800 has a cache of spare parts,
2492 antennas, coax, transmitters housed in South Carolina. The Palmetto 800 system and

2493 several local governments are currently procuring portable trunked sites for temporary site
2494 replacement in case of a catastrophic loss.
2495
2496 The Strategic Technology Reserve, as discussed in Section 5.3 will augment the current
2497 capability for catastrophic loss of communications restoration.
2498
2499 **Palmetto 800 trunked site redundancy:**
2500
2501 The Palmetto 800 systems utilize several forms of system and power redundancy;
2502
2503 Power   (1) Each site is equipped with a back up generator that will completely
2504   support the site for a minimum of 48 hours.
2505   (2) Each Palmetto 800 site is equipped with a DC rectifier system that
2506   operates the site. The rectifier system includes a battery bank system that
2507   will operate the site for 12 to 18 hours if the generator fails.
2508
2509 Site Trunking
2510   The Palmetto 800 sites are designed to operate even if they lose
2511   connectivity with the network. In the wide area mode radios have the ability
2512   to communicate across the state, in the site trunking mode the site continue
2513   to operate in a local county mode.
2514
2515 The State of South Carolina in 1994 funded the installation and recurring cost of a satellite
2516 radio and telephone in each of the States Emergency Operations Centers for catastrophic
2517 loss of communications. All of the circuits that support the Palmetto 800 system are TSP
2518 (Telecommunications Service Priority) lines.
2519
2520 CIO has a number of communication assets that directly support disasters and catastrophic
2521 loss of communications. During hurricane Katrina and Wilma, South Carolina deployed
2522 these assets to support Mississippi and Florida. These assets were also used in support of
2523 the 2005 Graniteville, South Carolina train derailment and catastrophic chlorine leak that
2524 killed 9 and injured over 400.
2525
2526 The CIO equipment cache includes:
2527
2528 • Two (2) portable tactical self-contained 75' tower systems equipped with (VHF, UHF
2529   & 800 repeaters) and generator.
2530 • One (1) portable tactical self-contained 100' tower system with a six (6) channel
2531   SmartZone® trunked site with conventional repeater and generator.
2532 • Seven (7) suitcase style portable repeaters in the VHF, UHF and 800 bands. The
2533   portable repeaters are designed to be deployed as airborne communications
2534   platforms utilizing Civil Air Patrol Aircraft or roof top mounts.
2535 • Twenty-five (25) VHF portable radios
2536 • Twenty-five (25) UHF portable radios
2537 • Two hundred (200) 800 MHz portable radios, (150) are P-25 capable
2538 • Five (5) gateway devices

2539 • Fifty (50) satellite phones
2540 • Deployable technical and programming support.
2541 • One (1) 40' communications bus with 5 dispatch consoles
2542 • Twenty-one (21) spare 800 MHz conventional repeaters (100 watt)
2543 • Twenty (20) portable repeaters assigned to fire department 100' aerial ladders or other
2544   elevated aerial platforms (on order).
2545
2546 Numerous agencies have purchased additional equipment on their own to support
2547 communications interoperability and catastrophic communication loss. The State ESF-2
2548 maintains a list of State's, private companies and military units that have deployable tower
2549 systems that may be available from within the State or from neighboring states that could
2550 be used during a catastrophic loss of communications.
2551
2552 All agencies are encouraged, as part of South Carolina existing interoperability plans, to
2553 program the appropriate VHF, UHF and 800 MHz interoperability channels in both the
2554 repeater and simplex modes to enhance radio to radio direct communications should
2555 communications infrastructures failed.
2556
2557 **Transportation Initiative**
2558
2559 Transportation safety and security elements, if authorized by the FCC, are able to
2560 participate in the Palmetto 800 shared system. Numerous local and regional bus
2561 transportation systems participate in the Palmetto 800 statewide system or the local
2562 government 800 MHz trunked systems for their daily communications needs.
2563 The South Carolina State Ports Authority security operation is a part of the Charleston
2564 County 800 MHz system which has the capability to access the Palmetto 800 System.
2565 FCC regulations on frequency use and sharing continue to limit some interoperability
2566 solutions to gateways. South Carolina has no intercity bus services or passenger rail
2567 services with safety or security elements operating within the state.
2568
2569

2570 **Top Priority Strategic Initiatives**
2571
2572 In the following two tables are listed some of the key Initiatives (Table 16) to be funded
2573 through the PSIC process. The key Initiatives are detailed in section 6.0. The 2nd table
2574 (Table 17) links the key Initiatives to the goals above.
2575
2576
2577 **Table 16 Top Priority Strategic Initiatives and Their Links to the South Carolina**
2578 **Vision, Mission, Goals and Objectives**
2579

Top Priority Strategic Initiatives	Initiative Project Descriptions
Western Piedmont Interoperability	Migrate all first responders in Anderson County to Pal 800. Support 800 MHz communications systems throughout the county and Piedmont region-- P-25 sub-cell will be installed on the Pal 800 system.
Department of Public Safety Communications Upgrade	DPS radios must be upgraded to maintain interoperability with P25 and Omni Link 800 MHz systems. Upgrading to P25 and Omni Link enables S.C. DPS to communicate with multiple jurisdictions/disciplines throughout the State and with the VIPER system in North Carolina.
Georgetown Simulcast Upgrade	Addition of a Pal 800 Network simulcast site at Garden City/Murrell's Inlet will provide interoperable communications to a densely populated, high tourist area that is highly vulnerable to hurricanes/tropical systems and is in an earthquake zone.
Greenville County Simulcast Upgrade	The 800 MHZ coverage in Greenville county is very poor and requires an additional simulcast sub-cell site to enhance coverage.
Statewide Interoperability	Populate the National CASM tool to give SC a data base of interoperable equipment and frequencies for SC. Funds will continue the state cross disciplinary interoperability training classes through 2010. A Statewide tabletop and full scale communication only exercise will be developed and conducted. Staffing and coordinator support will be used to maintain the plan, help manage the PSIC grants and implement the plan.
Jasper County Tower	A new Pal 800 radio tower will enhance coverage to fill some poor coverage areas allowing first responders, EMS, fire, law enforcement agencies, and dispatch centers to communicate.
Charleston Consolidated 911 Dispatch	Design a Consolidated 9-1-1 Center for Charleston County utilizing interoperable data networks for rapid deployment of emergency responders.
Statewide Radio Interoperability	Update Pal 800 sites and purchase new/upgrade radios for 6 counties and one college that require them in order to be compatible with the Pal 800 MHz system and increase interoperability across the state.
Strategic Technology Reserve	This Investment provides for a significant addition to the State's Strategic Reserve--to include a portable satellite based VOIP phone and data system; cache for 25 UHF, 25 VHF, and one hundred 800 MHz radios--bringing the total of 800 MHz radios in the State's cache to 250.

2580
2581 The initiatives mentioned in the table support the State's Vision and Mission by supporting
2582 the State's move to Palmetto 800—a standards based shared system, with a well defined

2583   governance and support structure. How the State's strategic goals and objectives are
2584   linked to the initiatives is provided in the table below.
2585

Top Priority Strategic Initiatives	Goal / Objective Supported
Western Piedmont Interoperability	This Initiative addresses Goals 1, 2 and 4 in particular as follows: It will close the aforementioned coverage gaps by installing P-25 simulcast sub-cells, and provide emergency responders needed P-25 compliant radios and or upgrades. Training will be provided for Palmetto 800 as needed (Goal 6).
Department of Public Safety Communications Upgrade	This Initiative supports Goal 2 by providing P25 upgrades that will impact jurisdictions across the entire State. Training will be provided for Palmetto 800 as needed (Goal 6).
Georgetown Simulcast Upgrade	This Initiative addresses Goals 1, 2 and 4 in particular as follows: It will close the aforementioned coverage gaps by installing P-25 simulcast sub-cells. Training will be provided for Palmetto 800 as needed (Goal 6).
Greenville County Simulcast Upgrade	This Initiative addresses Goals 1, 2 and 4 in particular as follows: It will close the aforementioned coverage gaps by installing P-25 simulcast sub-cells. Training will be provided for Palmetto 800 as needed (Goal 6).
Statewide Interoperability	This Initiative remedies governance and interoperability planning gaps by funding the continued development of a Statewide interoperability plan (Goal 10); and continued interoperable communications assessments using the CASM tool in every county; and by meeting with county officials to determine gaps (Goals 5 & 9)
Jasper County Tower	This Initiative addresses Goal 1 by building a tower that increases interoperability in a high risk area.
Consolidated 911 Dispatch	This Initiative supports planning efforts associated with Goal 10.
Statewide Radio Interoperability	This Initiative supports Goal 2 by addressing emergency responder equipment shortages by providing P25 radios, software, and training to emergency responders in over 20 jurisdictions and agencies across the State.
Strategic Technology Reserve	This Initiatives supports Goal 8 by providing the following to the State Cache: a portable satellite based VOIP phone and data system; cache for 25 UHF, 25 VHF, and one hundred 800 MHz radios--bringing the total of 800 MHz radios in the State's cache to 250.

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2587

5.5   National Incident Management System (NIMS) Compliance

2589

The State of South Carolina, along with all of its counties, has adopted the National Incident Management System (NIMS) and is currently compliant with NIMS requirements. NIMS has been incorporated into the State Emergency Operations Plan and the State Homeland Security Strategy. Mark Sanford, the Governor of South Carolina, issued Executive order 2005-12 on June 3, 2005 directing the adoption of the National Incident Management System (NIMS) as the standard for incident management in the state. The state developed the *National Incident Management System (NIMS) Strategic Implementation Plan* to provide the State of South Carolina with a strategic roadmap for coming into full compliance with the intent of NIMS Implementation including the institutionalization of NIMS within the State of South Carolina. Local jurisdictions and state agencies have been tasked, via several joint issued Homeland Security Information Bulletins from the South Carolina Law Enforcement Division (SLED) and the South Carolina Emergency Management Division (SCEMD), to follow the NIMS implementation matrices developed by the NIMS Integration Center (NIC). The National Incident Management Capability Assessment Support Tool (NIMCAST), which is the preferred compliance tool of FEMA, will be utilized to ensure and assess FY2007 NIMS compliance. The State has, and continues to fund a NIMS Coordinator for the state whose job duties are to ensure that both state and local agencies understand NIMS and compliance issues. Also, as mentioned above, the State has also developed a strategic roadmap to guide NIMS implementation statewide.

The Communications Interoperability Procedures incorporated in the State Plan and ESF-2 Emergency Preparedness Plans for Public Safety Agencies support NIMS, unified command, common terminology and integrated communications.

The Statewide Communications Interoperability Plan supports and promotes the use of the National Incident Management System (NIMS) by:

- Providing integrated communications resources
- Promoting the use of common (plain text) terminology
- Utilizing resource typing where available
- Using the *National Mutual Aid Glossary of Terms and Definitions* and elements of the *Resource Typing Definitions* into your daily emergency management activities and operating procedures
- Using the definitions, kinds and types used in the national system when requesting or ordering incident resources
- Providing resources to support unified command operations

2627

5.6 Review and Update Process

The South Carolina SCIP will be a living document that will have to address new strategies
and technologies throughout its life. The CIO as the administrator for the Palmetto 800
Network, Palmetto 800 conventional repeater system, and communications contract
administrator for SC will be the lead agency coordinating the review and update process.
The CIO will update the plan in conjunction with the South Carolina 800 MHz Trunking
Advisory Committee, the Local Government Communications Association, and the
Regional and State CTCCs Requested changes will then be sent to the State CTTC
Council for final approval. All changes will be summarized in an updated PSIC plan
produced annually—published in the January time frame each year.

Changes in the plan will be communicated through the local associations including Fire,
EMS, Law Enforcement, APCO and Sheriff's associations, regional meetings, Palmetto
800 user meeting, state association meeting and regional CTCC Committees. Much of this
process is already is placed and is a component of the current Palmetto 800 Network and
the Palmetto 800 web site (http://cio.sc.gov/councilscommittees/palmetto800/).

2645

6 IMPLEMENTATION

2647

Implementation of the Interoperable Communications Plan throughout South Carolina will require a statewide effort. The implementation efforts will be coordinated in conjunction with the State CTCC, and will include State Agencies, County Governments, Municipal Governments, Fire, EMS, Law Enforcement, Emergency Management Agencies that are located throughout the State of South Carolina. The responsibilities for Public Safety Interoperable Communications implementation efforts are broken down by governmental level and detailed below:

1) **PSIC Implementation Oversight** – Will be carried out by the State Counter Terrorism Coordinating Council (CTCC) in coordination with the State CIO (See Section 4.1). The CTCC has cross-agency, executive level representation, and is ideal to oversee this critical initiative in its advisory role to the State Homeland Security Advisor. In addition, the State's CIO is an ideal partner in this undertaking as it has already established longstanding and respected governance structures. The State CTCC and CIO have the following responsibilities:

   a) Include PSIC implementation updates on their regular meeting agendas and discuss efforts within their respective areas/regions to meet PSIC implementation requirements as outlined in this plan.
   b) Assign PSIC implementation tasks to the communications subcommittee within State CTCC to capture key information and provide regular updates to the CTCC Chair and members.
   c) To ensure PSIC implementation is facilitated by state and local law, establish a legislative review subcommittee to review the existing state laws that relate to interoperable communications. This subcommittee will make recommendations back to the State CTCC regarding appropriate changes and modifications to existing state laws, policies and regulations to successfully implement and sustain PSIC.
   d) SC Radio systems will be encouraged to implement a strategy to migrate to a Project 25 (P-25) standards based technology. All future equipment purchased through grant funds should be P-25 capable or upgradeable.

2) **State Level Responsibilities** - Listed below are responsibilities for the implementation of the PSIC throughout the State.

   State Law Enforcement Division (SLED) – As the lead agency for Homeland Security in the state, SLED is responsible for the oversight of all Department of Homeland Security initiatives within the State. With respect to PSIC Implementation, SLED has the following responsibilities:

a) As the Chair of the CTCC ensure the State and Regional CTCC's address PSIC Implementation issues as a part of their normal course of business and remain cognizant of PSIC implementation milestones as laid out in this plan.
b) As the primary agency interacting with DHS with respect to grant issues, SLED will ensure the PSIC Implementation funding needs are taken into account during the grant submission process.
c) Monitor the implementation of the PSIC Grant--to include financial and programmatic monitoring.

Division of the State Chief Information Officer (SCCIO) – Assist SLED in the implementation of PSIC initiatives and provide direct oversight of Interoperable Communications activities throughout the State. Additionally, South Carolina CIO is tasked with the following responsibilities:
a) Ensure that CIO's state communications interoperability coordinator chairs the CTCC's Communication Subcommittee and coordinates with Regional CTCC's, and other governance organizations (i.e. Local Government Communications Association; User's Group; Palmetto 800 User Advisory Committee as defined in the state contract with Motorola and State public safety associations) to implement the PSIC plan.
b) Ensure PSIC implementation funding needs are identified and taken into account during the grant submission process at the state level. Also develop budget plans to support PSIC Implementation needs in anticipation of reductions in grant funding.
c) Ensure that PSIC is appropriately exercised.
d) Provide a central point of contact to track and coordinate PSIC training and that training is sufficient to cover the State's interoperability needs.

Monitoring will be performed by representatives of the SAA in conjunction with CIO interoperable communications experts. The SAA, with input from the CIO's Office will ensure that new purchases under the PSIC program, and all other grants programs managed by the SAA, will comply with the statewide plan via the enforcement of Special and General Grant Conditions. Since the SAA approves all purchases, they have the authority to enforce all conditions. Existing equipment will be allowed serve out its useful life, until it is has to be replaced due to a change in technology or end of life.

The statewide interoperability and investment plans will specify key milestones and metrics. Desk and on-site grant monitoring will be performed by the SAA (with interoperable communications expertise drawn from the SCCIO as needed) to insure these milestones and metrics are being met.

The Palmetto 800 Network implementation plan began back in 1992 and the direction of the system has remained consistent through out the years. The initial short term goal of statewide mobile coverage was completed in 1993. The long term strategy of statewide hand held cover has not been met due to funding and the lack of FCC spectrum needed to complete the project. The CIO's wireless section has been responsible for this project since 1995 when the State Contract for the statewide system was signed.

2733 Most of the key successes for the PSIC Plan continue to follow the path SC has been
2734 pursuing since 1992.
2735
2736 1) Ensure adequate coverage
2737 2) Provide user training in radio operations and use of the interoperability tools
2738 3) Assist local governments with the acquisition of interoperable radio equipment through
2739 grant and state contracts.
2740 4) Encourage daily use of the system to enhance officer safety through an end user
2741 controlled interoperability solution.
2742 5) Encourage public safety use of the Palmetto 800 system.
2743 6) Support the use of the CASM Tool – new.
2744 7) Enhance communications strategic technology equipment reserves.
2745 8) Exercise communications strategies and equipment on a regular.
2746 9) Ensure coordinated use of all mutual aid and interoperability technologies.
2747 10) Support and funding from the SC Legislature.
2748 11) Ensure VHF and UHF users have access to Palmetto 800 for interoperability
2749 12) Ensure that radios currently in use will comply with newer technology (700 MHz and
2750 narrowbanding)
2751
2752 The PSIC grant program is seen as an extension of the concepts that South Carolina has
2753 already embraced through the Palmetto 800 Network. The Palmetto 800 Network holds bi-
2754 annual meeting (all users across the state are invited to attend) to discuss system strategies,
2755 funding, interoperability, legislation, projects and future directions. These meetings have
2756 been held on a bi-annual basis since 1995. The CIO's office also attends most of the local
2757 association meetings throughout the State to provide updates to public safety agencies as
2758 part of its ongoing interoperability responsibilities.
2759
2760 Training
2761 A key success factor to interoperability is training. South Carolina already has an
2762 interoperability training class offered through the Law Enforcement and Fire Training
2763 academies.
2764
2765 Educating Policymakers and Practitioners on the Interoperability Goals and Initiatives: The
2766 State CTCC in their role as the SEIC, provides the goals and initiatives / updates on the
2767 statewide interoperability plan to local practitioners and policymakers statewide. They
2768 utilize the State 800 Trunking Committee and the local government Communications
2769 Association to assist in this endeavor. Additionally, the planners proposed in Initiative #5
2770 will assist in educating policymakers and practitioners on the goals and Initiatives within
2771 the SCIP.
2772

2773
2774 **Strategic Initiatives Implementation**
2775 South Carolina's nine key initiatives funded through this phase of the PSIC grant program
2776 are listed below.
2777
2778 **1. Western Piedmont Interoperability Initiative.** Migrate all first responders in
2779 Anderson County to Pal 800. Support 800 MHz communications systems throughout the
2780 county and Piedmont region--Anderson is building a P-25 subcell on the Pal 800 system as
2781 as purchasing radios for the region.
2782
2783 Anderson County as well as 3 other counties (Abbeville, Pickens, Oconee) in the Western
2784 Piedmont (known as the "Western Piedmont Regional Emergency Management Task
2785 Force") have significant coverage and interoperability issues due to the varying terrain and
2786 myriad of VHF, UHF, and 800 MHz systems. The goal is for every first responder to
2787 communicate on a single integrated radio system--the Palmetto 800 system. With this
2788 Investment ($2.5 M) Anderson County will enhance communications within Anderson
2789 County and surrounding areas by purchasing additional radios (over 200) and
2790 infrastructure to include subscriber equipment and/or upgrades, additional P25 site
2791 equipment, a simulcast subcell for the Pelzer/Powdersville area, and upgrades for SC
2792 Highway Patrol trooper's radios that operate in Anderson County. Anderson County
2793 expects that upon completion, every first responder from the local level to the state level,
2794 will be on the Palmetto 800 system with instant interoperability. The primary method of
2795 communications will be utilizing the Palmetto 800 network--the state-wide SmartZone
2796 repeater system, and 800MHz simplex.
2797
2798 Partners and End-users that will be involved include: Motorola, Palmetto 800, members of
2799 the Western Piedmont Regional Emergency Management Task Force. Anderson County
2800 proposes the formation of an advisory board to oversee interoperability within Anderson
2801 County as well as within the Western Piedmont Regional Emergency Management Task
2802 Force areas. In addition, since this is a partnership with Palmetto 800, Anderson County
2803 will seek guidance from the Palmetto 800 user advisory committee (see exhibit 2 in the
2804 Statewide Communications Interoperability Plan for a listing of members and agencies).
2805
2806 The project manager for this project will be Matthew Littleton with Anderson County
2807 Public Safety. Matthew is currently Captain of Operations for Anderson County Public
2808 Safety. Captain Littleton has a wealth of public safety experience in communications and
2809 disaster preparedness. In addition, Captain Littleton has forged the relationships that are
2810 required to make such a project possible. The project will be managed and coordinated
2811 with persons currently engaged in Palmetto 800 operations. Anderson County technicians
2812 will oversee the issuance of subscriber equipment and software upgrades for existing
2813 subscriber equipment. The project manager will ensure that all equipment has been
2814 specified and ordered to comply with current and reasonable future expansion. In addition,
2815 the project manager will partner with the SC Criminal Justice Academy to provide training
2816 for end users as well as interoperability training for agencies.
2817 The overall management structure of the Palmetto 800 system is in place and coordinated
2818 out of the CIO's office, in conjunction with the Palmetto 800 User Advisory Committee.

2819 These entities have structured, regulated, and coordinated the implementation and
2820 management of the Palmetto 800 system Statewide.
2821
2822 All agencies within the Piedmont benefiting from this Investment are a part of the South
2823 Carolina Mutual Aid Agreement and all Fire Departments involved are part of the SC
2824 Firefighter Mobilization Plan. These agencies have great working relationship and will
2825 utilize the equipment from this project to continue to build upon this concept. The
2826 following agencies will be affected by this proposal:
2827 Pickens County: Clemson University Police, Clemson University Fire, Clemson City
2828 Police, Central City Police, Central Fire, Liberty Fire, and Easley Fire
2829 Abbeville County: Abbeville County EMS, Abbeville County Sheriff, Abbeville County
2830 Fire, Abbeville City Police, Abbeville City Fire, Town of Due West, Calhoun Falls Police
2831 Anderson County: Anderson County Sheriff, Anderson County Fire, Anderson County
2832 Public Safety, Anderson City Fire, Anderson City Police, Belton Police, Belton Fire,
2833 Honea Path Police, Honea Path Fire, Iva Police
2834 South Carolina Highway Patrol.
2835
2836 Some of the milestones for this investment are the following:
2837

2838 Milestone #1	Start Date:	End Date:
2839 Project Kickoff	April 2008	April 2008
2840 Meeting		

2841   A meeting will be held to advise all recipient agencies of the requirements and
2842 award(s). Information will be given out at that time that will identify criteria and
2843 requirements of the project.
2844

2845 Milestone #2	Start Date:	End Date:
2846	April 2008	June 2009

2847 Order Subscriber Equipment, Upgrades, and P25 Infrastructure.
2848 Once the award process is complete, the Project Manager will review the equipment list,
2849 solicit a current quote, and process the order. Meetings will be held to ensure that all items
2850 are in compliance with the grant guidelines.
2851

2852 Milestone #3	Start Date:	End Date:
2853	May/June 2008	Sept 2009

2854 Issue and Install equipment.
2855 Once the subscriber equipment is delivered, the Project Manager will schedule training for
2856 recipients. Once training is completed, the equipment will be issued and tracked.
2857
2858

2859 Milestone #4	Start Date:	End Date:
2860	May/June 2008	Sept. 2009

2861 Provide end-user training.
2862 Train equipment recipients.
2863

2864 Milestone #5	Start Date:	End Date:

| 2865 | April 2008 | Sept 2009 |

2866 Order and Install P25 Site Equipment.
2867 This Milestone will be done in conjunction with Milestone #2. The Project Manager will
2868 work with a Palmetto 800 representative to ensure that all installation timelines over the
2869 next 5 months are kept and that regular updates are provided to the work group.
2870
2871	Milestone #6	Start Date:	End Date:
2872	Conduct Site	Sept 2009	October 2009
2873	Equipment Acceptance Test		

2874
2875 Once the site is complete, the Project Manager will oversee "Acceptance Testing" to
2876 ensure that the site is performing to standards and that the predicted coverage plans
2877 correspond with actual coverage. Once complete, the site will be placed in service. At that
2878 time, the end-users will be interviewed to determine performance of the site.
2879
2880 Evaluation of project goals will be regularly addressed. During the project time frame,
2881 regular interviews will be conducted with recipients at random to determine problem areas
2882 and to determine the effectiveness of the project. In addition, Anderson County will
2883 receive regular system reports indicating the number of calls made, the number of busy
2884 calls, and the number of system outages from Palmetto 800. Anytime an issue is
2885 discovered, Anderson will take measures to correct the issue. Palmetto 800 will be
2886 responsible for network integrity and management of the system and will report on such
2887 activities to the Project Manager. Currently, there is only about 95% reliable coverage on
2888 the Palmetto 800 system for mobile radios in Anderson County. This Investment supports
2889 the purchase and installation of a simulcast subcell and needed radios to increase that
2890 capacity to about 99% mobile coverage and 95% portable coverage. In addition, Anderson
2891 seeks to improve the availability of Palmetto 800 radios to agencies both in and adjacent to
2892 Anderson County. This Investment will help achieve these goals. Ultimately, the goal is
2893 to have each first responder on the same communications platform utilizing the same radio
2894 system and the same protocol.
2895
2896 Users fees required to operate on the Palmetto 800 system will provide infrastructure
2897 maintenance going forward. In other words, the user fees funded from the local agencies
2898 pay for the use and maintenance of the Palmetto 800 system. Palmetto 800 will maintain
2899 reliability and integrity of each site. The existing Motorola service contract for the
2900 Palmetto 800 Network currently runs through 2011. The New Interoperability Fund
2901 established by the legislature July 1, 2007 will continue to assist local government with the
2902 cost of 800 interoperable equipment and we are hopeful that the Legislature will increase
2903 the funding from 33% this year to 50% next year. In addition, since this Investment will
2904 be part of the Palmetto 800 system, training plans and courses, SOPs, system
2905 management, and oversight are provided by the State.

2906
2907 **2. Department of Public Safety Communications Upgrade.** DPS radios must be
2908 upgraded and updated to maintain interoperability with new 800MHz system. Update of
2909 "P25" and "Omni Link" enables S.C. DPS to communicate with multiple
2910 jurisdictions/disciplines throughout the State and with VIPER system in North Carolina.
2911 As the counties of Charleston, York and Anderson upgrade their systems to P25, by going
2912 from Motorola 4.1 to 7x platforms, they will loose interoperability with the Dept. of Public
2913 Safety (DPS) radios in all of these jurisdictions, without flashcode and firmware upgrades
2914 for the latter. In addition, without the upgrades, the DPS radios are not P25 compliant. In
2915 addition, interoperability with the North Carolina (NC) Viper communications system
2916 along the border is now problematic without Omni Link. To address these, SC will
2917 upgrade the flashcode and firmware of digital radios to make them fully compatible with
2918 the Motorola 7x system and Omni Link accessible. Of DPS' 2,500 active radios, funding is
2919 being requested via this proposal to upgrade the 448 radios (in support of the Palmetto 800
2920 statewide system) that are of the newest technology and are capable of transitioning with
2921 future technological advancements. This will make DPS P25 compliant and enable the
2922 SCDPS' officers to continue to communicate with jurisdictions upgrading to 7x throughout
2923 the State. It also enhances interoperable communications with NC. DPS' ability to
2924 maintain and enhance interoperability is critically important to the State as they are called
2925 daily for assistance with traffic collisions and also handle large-scale disasters involving
2926 multiple agencies and jurisdictions.
2927
2928 The management team responsible for the oversight and implementation of this investment
2929 includes the Department of Public Safety's (DPS) Agency Director and the SC Highway
2930 Patrol (SCHP part of DPS) Command Staff (Colonel, Lt. Colonel, Major, Captains, etc.,
2931 who will provide the oversight for the project). Captain J.D. Connelly, Unit Commander,
2932 and Nick Babin, both of the SCHP's Resource Management Unit, will be responsible for
2933 the day to day management of the project. The Highway Patrol's Resource Management
2934 Unit is commanded by Captain Connelly and is comprised of Business Administration,
2935 Patrol Supply/Research and Development, Information
2936 Technology Office, and Communications Logistics. Nick Babin, as project manager, will
2937 ensure the acquisition of all approved grant items and their effective operation. Patrol
2938 Supply will order any equipment awarded via this proposal. The SCHP's Strategic
2939 Planning - Grants Administration Unit will meet the program / financial standards set by
2940 the grantor, and DPS' Grants Accounting Office will ensure that all State financial
2941 regulations / laws are adhered to.
2942
2943 The project management responsibilities are related to those existing with the Division of
2944 the State Chief Information Officer, Wireless Section, as identified in the Statewide
2945 Communications Interoperability Plan and the Tactical Interoperable Communications
2946 (TIC) Plan. Therefore, the DPS management team will work very closely with the
2947 Wireless Section of the State Chief Information Officer to ensure adherence to the State
2948 Plan and the TIC. In fact, DPS' Wireless Manager, Nick Babin, already has a well-
2949 established professional relationship with the State CIO's Wireless Interoperability
2950 Coordinator, George Crouch. This will ensure a seamless operation with respect to the
2951 Investment's success.

2952
2953 The governance structure that will provide oversight to address interoperability within the
2954 investment will include the SC Dept. of Public Safety in coordination with the State CIO's
2955 Office and the State's Homeland Security SAA. Part of the State's interoperability plan
2956 includes mutual aid agreements necessary to assist with the Investment's implementation
2957 and operational effectiveness. Many of the participating agencies have existing standard
2958 operating procedures to promote the proper use of the interoperability resources within this
2959 Investment because of South Carolina's actions to become P25 and Omni-Link compliant.
2960 The following agencies and jurisdictions have been identified as moving their systems to
2961 P25/7x and DPS officers in each of the associated regions will be working with their
2962 counterparts to upgrade their systems to be compatible: Charleston Co.
2963 Sheriff/EMS/EPD/Aviation Auth., N. Charleston PD/FD, Mt. Pleasant PD, Isle of Palms
2964 PD, Sullivan's Isl. PD, Folly Beach PD, State Ports Auth., Citadel PD, York Co.
2965 Sheriff/FD/EMS, Rock Hill FD, Anderson Co. Sheriff, all Anderson Co. Municipalities,
2966 NC Hwy. Patrol, etc.
2967
2968 Some of the milestones for this investment are the following:
2969
2970 Milestone #1 Receive Funding   Start Date: 1 April 08   End Date: 30 April 08?
2971
2972 After the Federal funds are released to the State, and the State grants DPS the requested
2973 funds for expenditure in accord with grant guidance (& general and special conditions),
2974 this project will begin.
2975
2976 Milestone #2 Order Upgrades   Start Date: 1 May 08   End Date: 31 May 08
2977
2978 Upon receipt of grant funding, an order for the needed radio upgrades will be placed. It
2979 should take less than 30 days from time of order to receive all upgrades.
2980
2981 Milestone #3 Perform Upgrades   Start Date: 1 June 08   End Date: 28 Feb 09
2982
2983 Upon receipt of ordered flash upgrades, planning of statewide reprogramming will be
2984 generated. These upgrades will be done in conjunction with a fleet wide radio reprogram.
2985 From begin to end, it should take no more than 8 months to complete this project.
2986
2987 Evaluation Plan: The project's outcomes will be evaluated by surveying many of the
2988 following entities to see if the Investment made a difference in their ability to successfully
2989 communicate with the SCDPS using "P25" and/or "Omni-Link" technology: the
2990 Charleston County Sheriff's Office, the North Charleston Police Department, the North
2991 Charleston Fire Department, the Mt. Pleasant Police Department, the Isle of Palms Police
2992 Department, the Sullivan's Island Police Department, the Charleston County Aviation
2993 Authority, the Folly Beach Police Department, Charleston County EMS, the State Ports
2994 Authority, the Citadel Public Safety Division, the Charleston County Emergency
2995 Preparedness Division, the York County Sheriff's Office, the York County Fire
2996 Department, the Rock Hill Fire Department, the York County EMS, the Anderson County

2997   Sheriff's Office, all Anderson County Municipalities, and/or the North Carolina Highway
2998   Patrol.
2999
3000   Users' fees required to operate on the Palmetto 800 system will provide infrastructure
3001   maintenance going forward. In other words, the user fees funded from the local agencies
3002   pay for the use and maintenance of the Palmetto 800 system. Palmetto 800 will maintain
3003   reliability and integrity of the system. In addition, since this Investment will be part of the
3004   Palmetto 800 system, training plans and courses, SOPs, system management, and oversight
3005   are provided by the State. Specific training and SOPs for radio use by DPS will be
3006   provided by DPS.
3007

3008 **3. Georgetown County Site Simulcast Upgrade.** Addition of a Pal 800 simulcast site at
3009 Murrell's Inlet will provide interoperable communications to a densely populated, high
3010 tourist area that is highly vulnerable to hurricanes/tropical systems and is in an earthquake
3011 zone. The tower repeater system does not provide enough coverage, resulting in
3012 interoperability issues.
3013 This Initiative directly solves interoperability coverage gaps in Garden City and Murrells
3014 Inlet area of Georgetown County and Horry County. Interoperability is accomplished in
3015 Georgetown County by utilizing 800 MHz as the common platform for all State, Law, Fire
3016 and EMS services. Interoperability with Horry County is accomplished through exchange
3017 of radio system ID's, statewide mutual aid talkgroups on the Palmetto 800 Network and
3018 conventional mutual aid repeaters (see the Palmetto 800 Network – Mutual Aid
3019 Talkgroups listed in the State Communications Interoperability Plan, currently page 51).
3020 This investment will provide a simulcast subcell that as part of the statewide Palmetto 800
3021 Network will be utilized and exercised as part of the state's annual full scale exercise and
3022 the annual regional exercise conducted by State Emergency Management. Depending on
3023 annual funding, some years quarterly exercises are held, but a minimum of two exercises
3024 are held each year. This will provide interoperability enhancements in the area for all 800
3025 MHz users in South Carolina. The new Palmetto 800 trunked site will be installed on the
3026 Horry/Georgetown County line. The enhanced radio coverage will improve
3027 communications between all the public safety responders and agencies that serve the area.
3028 Since this area is a coastal county prone to hurricanes the area must always be prepared for
3029 potential evacuations, communications interoperability and coordination between all
3030 critical state and local first responders that support the evacuation efforts. The current lack
3031 of radio coverage directly affects the interoperability to support all hazards.
3032
3033 Partners in this project will be the Division of the State CIO, Palmetto 800 Advisory
3034 Committee, Georgetown County, the Garden City - Murrells Inlet Fire & Rescue Deptment
3035 and Horry County. The investment and effectiveness of the new site will be evaluated by
3036 the Committee to ensure that enhanced communications requirements meet the needs of
3037 the local first responders and state agencies.
3038
3039 Governance for the investment will include the Palmetto 800 Advisory Committee (see
3040 Exhibit 2 in the Statewide Communications Interoperability Plan for a listing of members
3041 and agencies), Horry County, Georgetown County (Georgetown already serves on the 800
3042 Advisory Committee) and Garden City – Murrells Inlet Fire and Rescue. The Georgetown
3043 site expansion project will be under the direction of the Division of the State CIO which is
3044 a division of the State Budget and Control Board. The control of the project will be under
3045 the CIO's Wireless Manager, who also is the administrator for the Palmetto 800 Network.
3046 Input will be provided by several multi-discipline committees whose key staff members
3047 collaborate, on regular bases, on many levels. These include the Counter Terrorism
3048 Coordinating Council's Communications Committee, the South Carolina 800 MHz
3049 Trunking Advisory Committee, the Palmetto 800 User's Group and the Local Government
3050 Communications Association. These committees represent state and local law
3051 enforcement, fire service members, emergency medical service agencies, emergency
3052 management agencies state and local government agencies. Direct monitoring of the

3053 investment justification will be performed by the South Carolina 800 MHz Trunking
3054 Advisory Committee which Georgetown County is a member.
3055
3056 Some of the short term milestones for this investment are the following:
3057
3058 Milestone #1   Start Date: End Date:
3059   01/01/08   02028-08
3060 Specifications and pricing for the investment
3061
3062 Milestone #2   Start Date: End Date:
3063 Equipment Contract   05/01/08   06/01/08
3064
3065 Milestone #3   Start Date: End Date:
3066 Tower lease   05/01/08   08/01/08
3067
3068 Milestone #4   Start Date: End Date:
3069   08/01/08   02/28/09
3070 Delivery and installation of the equipment
3071
3072 Milestone #5   Start Date: End Date:
3073 Testing of site   02/28/09   03/01/09
3074
3075 Key performance measures include the following: When the site is complete and
3076 operational, the additional radio coverage will be immediately noticed—account will be
3077 made of whether dead spots are removed. All agencies served in the areas will be affected
3078 immediately. Since the investment expands coverage using existing equipment capabilities,
3079 no additional training will be needed. The users will have all the same features and
3080 capabilities, just in a larger footprint.
3081
3082 Interoperability will be enhanced because there will be adequate coverage to access mutual
3083 aid talkgroups and channels. All agencies from State, Sheriff, police, fire, EMS, rescue,
3084 coroners, Dept. of Health, hospitals, FBI, ATF, National Guard, air medical services,
3085 power utilities and agencies from across the state will have direct access to this investment
3086 (the simulcast subcell) when operational. While this investment directly serves local
3087 agencies as part of the statewide Palmetto 800 Network it becomes a component of the
3088 state's broader statewide interoperability network and plan. This investment as part of the
3089 statewide radio system will provide direct access to over 500 agencies across the state.
3090
3091 Users fees required to operate on the Palmetto 800 system will provide infrastructure
3092 maintenance going forward. In other words, the user fees funded from the local agencies
3093 pay for the use and maintenance of the Palmetto 800 system. Palmetto 800 will maintain
3094 reliability and integrity of each site. The existing Motorola service contract for the
3095 Palmetto 800 Network currently runs through 2011. The New Interoperability Fund
3096 established by the legislature July 1, 2007 will continue to assist local government with the
3097 cost of 800 interoperable equipment and we are hopeful that the Legislature will increase
3098 the funding from 33% this year to 50% next year. In addition, since this Investment will

3099   be part of the Palmetto 800 system, training plans and courses, SOPs, system
3100   management, and oversight are provided by the State.

3101
3102   4. **Greenville County Simulcast Updgrade** The 800 MHZ coverage in Greenville
3103   county is very poor and requires an additional simulcast subcell site to enhance coverage.
3104   Additionally, Fire and EMS need funding to buy radios in order to implement the 800MHz
3105   system; and 2 UHF repeaters to enhance coverage.
3106
3107   This Initiative directly solves interoperability gaps in Greenville County - identified as
3108   Goal 1 in the State Enhancement Plan – Expand and Enhance Statewide Communications
3109   Interoperability to include: coverage gaps in one of South Carolina's largest population
3110   centers, Greenville County and the I-85 corridor in South Carolina. Many of the agencies
3111   serving the Greenville area already have 800 MHz radios, but do not use them on a daily
3112   basis because of interoperability and coverage problems in the area. Solving the coverage
3113   and interoperability gaps in the Greenville County area will directly enhance
3114   interoperability by encouraging users to turn their radios on, and allow agencies to use the
3115   Palmetto 800 Network (South Carolina's statewide interoperable radio system) on a daily
3116   basis. The solution to the problem includes the installation of new simulcast sites that will
3117   be part of the statewide Palmetto 800 Network providing interoperability enhancements in
3118   the area for all 800 MHz users in South Carolina. It includes two (2) new Palmetto 800
3119   trunked sites: one (1) installed in the center of the County and one (1) in the western end of
3120   the County along the North Carolina, South Carolina state line. The enhanced radio
3121   coverage will improve communications between all the safety of public safety responders
3122   and agencies that serve the Greenville County area. Partners in this project will be the
3123   Division of the State CIO, Palmetto 800 Advisory Committee, Greenville County and
3124   Greenville City.
3125
3126   The Greenville simulcast sub-cell project will be under the direction of the Division of the
3127   State CIO which is a division of the State Budget and Control Board. The control of the
3128   project will be under the CIO's Wireless Manager, who also is the administrator for the
3129   Palmetto 800 Network. Input will be provided by several multi-discipline committees
3130   whose key staff members collaborate, on regular bases, on many levels. These include the
3131   Counter Terrorism Coordinating Council's Communications Committee, the South
3132   Carolina 800 MHz Trunking Advisory Committee, the Palmetto 800 User's Group and the
3133   Local Government Communications Association. These committees represent state and
3134   local law enforcement, fire service members, emergency medical service agencies,
3135   emergency management agencies state and local government agencies. Direct monitoring
3136   of the investment justification will be performed by the South Carolina 800 MHz Trunking
3137   Advisory Committee which Georgetown County is a member.
3138
3139   The direct management of these projects will be performed by Mr. George Crouch, the
3140   Wireless Manager for the Division of the State Chief Information Officer. Mr. Crouch has
3141   extensive experience in public safety communications and is well qualified to perform
3142   these functions. Over the past five years he has successfully managed statewide
3143   interoperability projects, two simulcast sub-cell projects, construct of a new 400'
3144   communications tower and over $25 million in supporting grants. Mr. Crouch reports to
3145   the Manger of Network Services which is under the Operations Section of the State CIO.

3146 He is the appointed Interoperability Coordinator for the Palmetto 800 System and the
3147 designated Interoperability Coordinator for the State of South Carolina.
3148
3149 Milestone #1   Start Date: End Date:
3150   01/01/08   02/28/08
3151 Specifications and pricing for the investment
3152
3153 Milestone #2   Start Date: End Date:
3154 Equipment Contract   05/01/08   06/01/08
3155
3156 Milestone #3   Start Date: End Date:
3157 Tower leases   05/01/08   08/01/08
3158
3159 Milestone #4   Start Date: End Date:
3160   08/01/08   03/31/09
3161 Delivery and installation of the equipment
3162
3163 Milestone #5   Start Date: End Date:
3164 Testing of site   04/01/09   05/01/09
3165
3166 Milestone #6   Start Date: End Date:
3167 Project complete   06/01/09
3168
3169 The investment and the effectiveness of the new simulcast sub-cell sites will be evaluated
3170 by the Committee to ensure that enhanced communications requirements meet the needs of
3171 the local first responders and State agencies. The successful outcome--when the simulcast
3172 sub-cell is complete and operational the additional radio coverage will immediately be
3173 noticed. All agencies served by the areas will be affected immediately. The weak coverage
3174 areas along Highway 11 at the base of the mountains should see significant improvement.
3175 Since the investment expands the existing equipment and technology no additional training
3176 will be needed, the users will have all the same features and capabilities just in a larger
3177 area. Interoperability will be enhanced, because there will be adequate coverage to access
3178 mutual aid talkgroups and channels. All agencies from State, Sheriff, police, fire, EMS,
3179 rescue, coroners, Dept. of Health, hospitals, FBI, ATF, National Guard, air medical
3180 services, power utilities and other agencies from across the state will have direct access to
3181 this investment when operational. While this investment directly serves local agencies, as
3182 part of the statewide Palmetto 800 Network it becomes a component of the state's broader
3183 statewide interoperability network and plan. This investment as part of the statewide radio
3184 system will provide direct access to over 40,000 users representing over 500 agencies
3185 across the state.
3186
3187 Users fees required to operate on the Palmetto 800 system will provide infrastructure
3188 maintenance going forward. In other words, the user fees funded from the local agencies
3189 pay for the use and maintenance of the Palmetto 800 system. Palmetto 800 will maintain
3190 reliability and integrity of each site. The existing Motorola service contract for the
3191 Palmetto 800 Network currently runs through 2011. The New Interoperability Fund

3192   established by the legislature July 1, 2007 will continue to assist local government with the
3193   cost of 800 interoperable equipment and we are hopeful that the Legislature will increase
3194   the funding from 33% this year to 50% next year. In addition, since this Investment will
3195   be part of the Palmetto 800 system, training plans and courses, SOPs, system
3196   management, and oversight are provided by the State.
3197

3198 **5. Statewide Interoperability.** Populate the National CASM tool to give SC a data base of
3199 interoperable equipment and frequencies for SC. Staffing and coordinator support will be
3200 used to maintain the plan, help manage the PSIC grants and implement the plan.
3201
3202 A complete and accurate database of all public safety radio systems, frequencies and
3203 equipment within the state does not exist. A database is needed in order to plan and
3204 implement interoperability for VHF and UHF users and to plan and budget for the
3205 transition to narrow-band. Also, there is insufficient staffing to support statewide
3206 interoperability initiatives including the oversight of projects funded by the PSIC Grant
3207 Program, assist agencies with interoperability planning and SOPs, maintain the SCIP,
3208 manage the STR, participate exercises and provide communications interoperability
3209 support during major disasters. As such, a Strategic Initiative is to populate the CASM tool
3210 and hire two Communication Specialists to support interoperability. A vendor will be
3211 contracted to implement the Communication Assets and Survey Mapping (CASM) tool to
3212 acquire radio system information, train local government personnel on the gathering and
3213 input of the required information; and review the data for accuracy and completeness. In
3214 order to ensure adequate staffing, two full-time Communication Planners will be hired with
3215 statewide responsibility. The Communication Planners will work for the Division of the
3216 State Chief Information Office and under the direction of the Wireless Manager (who is
3217 responsible for statewide interoperability).
3218
3219 Some of the short term milestones for this investment are the following:
3220
3221 Milestone #1   Start Date: End Date:
3222   01/03/08   03/01/08
3223 A Position Description (PD) for the Communication Planners will be created. To ensure
3224 that all needs are addressed, the PD will be developed in coordination with the multiple
3225 councils listed above (CTCC Communications Committee, Palmetto 800 Users Advisory
3226 Council, and Local Government Users Association).
3227
3228 Milestone #2   Start Date: End Date:
3229   01/03/08   03/01/08
3230 Establish a CASM Implementation Committee comprised of multi-jurisdictional, multi-
3231 discipline representation.
3232
3233 Milestone #3   Start Date: End Date:
3234   02/01/08   03/15/08
3235 Develop bid specifications for CASM contractor
3236
3237 Milestone #4   Start Date: End Date:
3238   04/15/08   05/15/08
3239 Post Communication Planner Positions
3240
3241 Milestone #5   Start Date: End Date:
3242   04/15/08   05/15/08
3243 Solicit bids for CASM Contractor

3244			
3245	Milestone #6	Start Date:	End Date:
3246		06/15/08	07/30/08
3247	Interview and Hire Communication Planners.		
3248			
3249	Milestone #7	Start Date:	End Date:
3250		05/16/08	07/16/08
3251	Review bids and make award for CASM contractor		
3252			
3253			
3254	Milestone #8	Start Date:	End Date:
3255		08/01/08	08/01/09
3256	Contract begins work with agencies on the gathering and input of		
3257	data in CASM		
3258			
3259	Milestone #9	Start Date:	End Date:
3260		08/01/09	01/03/010
3261	Communication Planners assess CASM input and make recommendations to enhance		
3262	interoperability		

3263
3264
3265 Long terms goals for this initiative include: 1) Via the population of the CASM tool, a
3266 comprehensive and accurate communications database will be developed with continuing
3267 updates by agencies; 2) Database will be utilized by both state and local agencies for the
3268 more efficient and effective management of the 700 spectrum; 3) Database will allow the
3269 state and local agencies to identify equipment that will not be compatible with new
3270 technology; 4) The two additional Communication Planners have accomplished the tasks
3271 shown above resulting in proper grant oversight, increased interoperability planning, SOP
3272 development and management of STR equipment; 5) The State has created an Office of
3273 Emergency Communications in which planners and staff are state budget appropriated and
3274 solely dedicated to interoperable communications.
3275
3276 The Division of the State Chief Information Officer, Wireless Manager is responsible for
3277 implementing this project. He will be responsible for developing the contract for the
3278 CASM and the position descriptions for the Communication Planners. He will also be
3279 responsible for coordinating with the various communications councils as described in this
3280 plan.
3281
3282 The CASM project will be evaluated at least annually to determine the percent of agencies
3283 participating, completeness and accuracy of information provided and the utilization of the
3284 CASM database for planning purposes. It is expected that half of the counties will have
3285 their data entered by mid 2009. By the end of the contract, 2010, it is expected that all 46
3286 counties within the state will have supplied their information. The Milestones, as specified
3287 above, will also be utilized as performance measures. The CASM database will be used to
3288 identify communication gaps and therefore plans can be made to address those gaps by the
3289 Communication Planners.

3290 The performance of the additional Communication Planners will be evaluated through
3291 periodic review of their assigned tasks and responsibilities; and through the annual
3292 Employee Performance Management System. Staffing and coordinator support will be
3293 used to maintain the plan, help manage the PSIC grants and implement the plan.
3294
3295 Critical Success factors for this Initiative include the timely hiring of the contractor and
3296 communication planners, participation of all county agencies and their willingness to work
3297 with state planners, the continued support of the CASM tool by DHS.
3298
3299 Part of the CASM contract will be to educate communication personnel on the CASM tool.
3300 Also, regional meetings are held throughout the state which key stakeholders and policy
3301 makers attend. This initiative, including the CASM tool and communication planners, will
3302 be discussed at these regional meetings. The CASM tool will be briefed at these meetings
3303 as well as at practitioner meetings such as the Palmetto 800 Users Group meeting and the
3304 Local Government User's Association meetings. The Communication Planners funded
3305 under this initiative will be responsible for overseeing the operational requirements of this
3306 SCIP, assist in the development and update of SOPs, promote interoperability training
3307 already funded via another grant, and secure, and assist local units of government in
3308 securing, funding for interoperability. The Communication Planners will be subject matter
3309 experts and will therefore be available statewide for technical assistance and in
3310 participating in the development of technical solutions.
3311

6. Jasper County Tower. A new Pal 800 radio tower will enhance coverage in areas with little to no coverage allowing first responders, EMS, fire, law enforcement agencies, and dispatch centers to communicate.

There is only one communications tower in Jasper County that is used to operate on the Palmetto 800 system (which is the primary dispatch system for all agencies in the county and is utilized for statewide interoperability). This tower is less than 300 feet tall and lacks the adequate transmission capabilities to operate radios utilizing the Palmetto 800 system throughout the more than 600 square mile service area within the Jasper County region. This creates many safety issues for first responders as they are not able to communicate with dispatch and other responding units. Jasper County relies heavily on mutual aid from surrounding jurisdictions and the primary means of communication for mutual aid is 800 MHz. The solution to increase coverage is to build a 480 foot radio tower in the center of county and provide equipment and shelter for multi agency radio systems. Having access to multiple radio systems would benefit all Palmetto 800 users in many ways from redundancy to ability to encrypt transmissions. The tower would also include space for other agencies such as the Forestry Commission who is providing easements for guide wire locations and access to property where tower will be installed.

Some of the short term milestones for this investment are the following:

Milestone #1	Start Date:	End Date:
	01/01/08	05/01/08

Property Acquisition: The County will finalize transfer of the property for the tower to Jasper County, complete required surveys, environmental studies, and all other requirements.

Milestone #2	Start Date:	End Date:
	05/01/08	06/15/08

Tower evaluation: The foundation and material requirements will be coordinated. Also, planning will invovle scheduling for implementation of this project.

Milestone #3	Start Date:	End Date:
	06/15/08	08/01/08

Tower construction and material ordering: The foundation for the tower will be installed and other material will be ordered according the aforementioned implementation schedule.

Milestone #4	Start Date:	End Date:
	08/01/08	10/01/08

Tower erection and Hardware installation

Milestone #5	Start Date:	End Date:
	10/01/08	12/01/08

Testing and implantation of the tower to ensure that all systems are working.

3357   The long term goals are for the tower to provide radio and mobile data coverage for 90%
3358   of Jasper County, with mutual aid channels with Beaufort County and Hampton County as
3359   well as State and Federal agencies. This will also enhance the statewide Palmetto 800
3360   Network Mobile and handheld coverage area in Hampton County, Colleton County, and
3361   Palmetto 800 users in Beaufort County. It is expected that this tower will also allow the
3362   Jasper area to become one of the first areas in the state to utilize the 700 MHz spectrum.
3363
3364   Partners and end users that will be involved in this Initiative include: Jasper County
3365   Sheriffs Office, Fire and Rescue, Emergency Services, Detention Center; Town of
3366   Ridgeland Fire/Rescue and Police; City of Hardeeville Fire/Rescue and Police; Beaufort
3367   County Sheriffs Office, EMD, EMS; Town of Hilton Head, Town of Bluffton, City of
3368   Beaufort, Beaufort County Fire/ Rescue agencies, Hampton County emergency service
3369   agencies, US Fish and Wildlife (Savannah National Wildlife Refuge), Beaufort/Jasper
3370   Water and Sewer Authority, Coastal Carolina Medical Center, and LifeStar air ambulance.
3371   All local agencies in Jasper County have directly partnered for this project and
3372   memorandums of understanding are being developed and finalized. The statewide Palmetto
3373   800 network will also be a benefactor of this project. The Deputy Director of Emergency
3374   Services for Jasper County will be the lead manager for the project. He is a member of the
3375   communications/Technology Task Force and also regularly attends the Palmetto 800 Users
3376   Group meetings. The Deputy Director will coordinate the project through Palmetto 800
3377   network and Motorola team members. This is a single project for installing a
3378   communications tower; as such the work will be performed by licensed contractors and
3379   permitting will be required. This leaves little room for any errors with the completion of
3380   the project. This project will not be contracted out for implementation. Contract
3381   Management will be implemented by the Office of Emergency Services in Jasper County.
3382   State Contracts will be utilized to expedite this Investment. The
3383   Communications/Technology Task Force will provide oversight for the project while the
3384   Palmetto 800 Advisory Council will provide general recommendations/suggestion for
3385   maximum benefit of the Palmetto 800 network. The Project Director will serve as the
3386   liaison for both the task force and Advisory Council. He will work closely with Mr.
3387   George Crouch, SCIP POC, and a manager of the Palmetto 800 network to ensure all
3388   systems are compatible and working properly.
3389
3390   Several years ago, Jasper County created a Communication/Technology Task Force. This
3391   is a committee made up of all local agencies in the County whose primary function is to
3392   evaluate the needs of Jasper County as a whole and implement change where needed. This
3393   Task Force would evaluate this project and ensure timely and cost effective
3394   implementation. Performance measures for this Initiative will be measured by the
3395   Milestones. Long term performance measures of the tower will be managed by the
3396   Palmetto 800 Users Advisory Council (increased coverage of mobile and handhelds,
3397   performance of the tower and associated equipment, etc.).
3398
3399   Critical Success factors for this Initiative include the acquisition of the property which the
3400   tower will be constructed (along with successfully conducting all required studies and
3401   securing the proper permits), erection of the tower itself, and continued support of
3402   Palmetto 800 in Jasper County and the surrounding counties.

3403
3404   This tower will be part of the Palmetto 800 system and will there affect the statewide
3405   system in a positive manner. Successful completion and implementation of the tower will
3406   be notice by practitioners by the increased mobile/handheld coverage. Policy makers are
3407   currently aware of this tower, proven by their commitment to provide the match. Policy
3408   makers will continue to be educated via the regional Counter Terrorism Coordinating
3409   Council meetings, and the Palmetto 800 Advisory Committee.
3410
3411   This tower will be incorporated into the Palmetto 800 network. There are currently plans in
3412   place for operational requirements, development and enhancement of SOPs, training for
3413   800 MHz interoperability (opened to non 800 users as well), sustained funding of 1/3 of
3414   the monthly fee, and several advisory committees comprised of public (governmental
3415   mostly) and private (Motorola) to provide technical solutions.
3416

3417 **7. Charleston Consolidated 911 Dispatch Center.** Development of a Plan to design and
3418 implement Interoperable Data Networks (associated with Charleston County's
3419 development of a Consolidated 9-1-1 Center).
3420
3421 There is no effective means in place to share emergency information or intelligence
3422 immediately among multiple agencies, resulting in disjointed communications among
3423 public safety agencies within Charleston County. Charleston County has one of the highest
3424 risk factors due to its hurricane threat, chemical facilities, and the Port of Charleston.
3425 Charleston County has six PSAPs (Sheriff's Office Dispatch, EMS Dispatch, City of North
3426 Charleston, City of Charleston, Town of Mount Pleasant, and City of Isle of Palms). These
3427 separate dispatch centers can cause significant delays in vital information. Data sharing
3428 capabilities can assist in resolving this problem. This initiative involves the development
3429 of a plan for an interoperable data sharing platform which will be a next generation
3430 emergency services network to interconnect with local, state and federal agencies, to be
3431 established in conjunction with a Countywide Consolidated 9-1-1 Center. The review of
3432 available network options and resources within the Charleston County area will be used to
3433 build a broadband network design that will allow flexibility, high performance,
3434 interoperability and redundancy.
3435
3436 Some of the short term milestones for this investment are the following:
3437

3438	Milestone #1	Start Date:	End Date:
3439		06/01/08	09/30/08
3440	Contract with Appropriate Consultant.		
3441			
3442	Milestone #2	Start Date:	End Date:
3443		10/15/08	02/15/09
3444	Consultant meets with jurisdictions and agencies for needs assessment and information		
3445	gathering		
3446			
3447	Milestone #3	Start Date:	End Date:
3448		02/15/09	06/15/09
3449	Draft Plan Completed & Presented.		
3450			
3451	Milestone #4	Start Date:	End Date:
3452		06/15/09	09/30/09
3453	Final Plan Completed & Presented		

3454
3455 As a long-term goal, the County's planned Consolidated 9-1-1 Center is envisioned as an
3456 emergency information sharing "Hub" with data connectivity to local, state and federal
3457 agencies. This capability will require careful planning as it will lead into the deployment of
3458 "Next Generation 9-1-1", which will provide an IP based, interoperable, nationwide
3459 platform for emergency communications systems.
3460
3461 The Project Management Team responsible and their roles are as follows:

3462 1) The Project Manager will be the Project Officer from the County Administrator's
3463 Office who has been involved in the Consolidated Dispatch Project from the beginning,
3464 and is the Administrator's link to the Consolidated Dispatch Committee (soon to be
3465 Board). She will play the overall coordinator role regarding County staff, the Board, and
3466 the jurisdictions involved. Additionally, she will coordinate closely with the consultant or
3467 firm developing the plan regarding logistics, milestone timelines, deliverables and other
3468 contract management issues. She has extensive experience with managing consultant
3469 contracts involving multiple stakeholders.
3470 2) The Director of Radio, Telecommunications and E-9-1-1 and his staff, who will have
3471 technical coordination and oversight responsibilities, and have the technical expertise to
3472 handle this role successfully.
3473 3) The Consolidated Dispatch Board, who will play a significant role in oversight of the
3474 project. This group of top level chiefs from law enforcement, EMS and Fire will also have
3475 working groups or committees assisting in development of this plan and corresponding
3476 implementation goals.
3477 4) The Consolidated 9-1-1 Center Director, projected to be hired in May, 2008, will work
3478 closely with the Board and be involved in the oversight of this project.
3479 5) Charleston County Procurement Department, who will ensure that all appropriate
3480 regulations, policies and procedures will be followed regarding the contract with the
3481 Consultant for this project.
3482
3483 The purpose of this Initiative is to develop an Implementation plan and will therefore be
3484 measured by the milestones/short-term goals as specified above. However, the actual
3485 Consolidated dispatch/information hub will be measured by the degree of a decrease in
3486 response times, the degree to which information is more readily passed between agencies
3487 (which can be evaluated via exercises), and the number of agencies within Charleston
3488 County that participate in the system.
3489
3490 Plans for educating policy makers are already in place for this Initiative. The Charleston
3491 County Consolidated 9-1-1 Center has been solidified by County Council's decision to
3492 fund basic capital start-up costs and all operations after the third year. An
3493 Intergovernmental Agreement with governing structure has been developed and signatures
3494 are anticipated by the end of 2007. Once this Initiative has fully been implemented with
3495 the creation of the center, training classes will be held to ensure that all practitioners are
3496 educated on the new processes.
3497
3498 Success for this Initiative will be achieved when the Implementation Plan, as designed in
3499 this Initiative, dictates the operational requirements, SOPs, training, funding (most of
3500 which has already been identified with County Council's commitment), and technical
3501 solutions—completing the plan.
3502
3503 Partners and end users that will benefit from this public safety initiative will be emergency
3504 response entities from local, state and federal jurisdictions, as well as the general public.
3505 Evaluation of the investment will take place upon implementing the plan and documenting
3506 results of increased information accessibility.
3507

3508   **8. Statewide Radio Interoperability.** Update Pal 800 sites and purchase new/upgrade
3509   radios for several counties that require them in order to be compatible with the Pal 800
3510   MHz system and increase interoperability across the state and within the counties.
3511
3512   Across the State of South Carolina, there are several disparate communication systems. For
3513   example, the various public safety agencies in Spartanburg County utilize various radio
3514   frequencies, some being VHF, some UHF, and some 800MHz. This causes an
3515   interoperability issue on the scene of a major incident because various agencies cannot
3516   communicate directly with each other. In neighboring Greenville County, the most
3517   populous county in the state, the public fire service and EMS agencies work on three
3518   different platforms; VHF, UHF and 800 MHz. Within Clarendon County, most public
3519   safety organizations are operating on the Palmetto 800 MHz system, while the fire service
3520   utilized VHF. Because of the disparate systems, there are also many radios that are not
3521   capable of utilizing the 700 MHz spectrum, keeping up with the changing technology of
3522   the 800 MHz, and/or are not P25 compliant. Many portions of the state are beginning to
3523   utilize more advanced 800 MHz systems, which many radios throughout the state will not
3524   make the jump/switch. To mitigate the above interoperability problems, new 700-800
3525   MHz, digital, P25 compliant radios, and other 800 MHz equipment, will be procured for
3526   the above agencies.
3527
3528   Some of the short term milestones for this investment are the following:
3529

3530	Milestone #1	Start Date:	End Date:
3531		05/01/08	05/15/08
3532	Establish grant funds and accounts		
3533			
3534	Milestone #2	Start Date:	End Date:
3535		05/19/08	06/09/08
3536	Develop comprehensive plan for implementation		
3537			
3538	Milestone #3	Start Date:	End Date:
3539		06/16/08	07/14/08
3540	Procure equipment from State Contract if applicable		
3541			
3542	Milestone #4	Start Date:	End Date:
3543		07/15/08	08/30/10
3544	Program and train users on equipment recieved		
3545			
3546			
3547	Milestone #5	Start Date:	End Date:
3548		07/21/08	08/18/08
3549	Deploy equipment		
3550			
3551	Milestone #6	Start Date:	End Date:
3552		09/01/08	09/30/10
3553	Exercise equipment.		

3554			
3555	Milestone #7	Start Date:	End Date:
3556		010/06/08	09/30/10
3557	Review any issues from exercising/testing equipment		

3558

3559

3560 The long term goal of this Initiative includes increased interoperability throughout the
3561 state. All of the radios to be procured will be utilized on the statewide Palmetto 800
3562 Network, or a private 800 MHz within the state. Increased interoperability between
3563 disciplines and jurisdictions will be seamless due to radios being on the same platform.

3564

3565 This Initiative is comprised of several projects. Each project manager will utilize the State
3566 Contract for ordering radio equipment. The Orangeburg County Emergency Services
3567 division will be the lead agency with the project manager being the Deputy County
3568 Administrator, Emergency Services division. Spartanburg's project will be managed by
3569 Spartanburg County Communications / 911 Department. Beaufort County Project
3570 Management will be performed by The Beaufort County Communications Systems
3571 Manager. Clarendon County will utilize their Needs Assessment Committee (multi-
3572 discipline, multi-jurisdictional) committee for guidance while the Fire Chief and County
3573 Grants Administration will be the Project Managers. Jasper County Deputy Director for
3574 Emergency Services will be the Project Manager for their project. Greenville County Fire
3575 Departments will mange their own projects (there are seven fire departments in Greenville
3576 that have requested interoperable equipment). The Chief of each department will be the
3577 Project Manager. The College of Charleston, Director of Emergency Service will the
3578 Project Manager for their project. The State Contract will be used to procure all equipment
3579 eligible under this Investment. Each agency will utilize their own internal purchasing
3580 department to procure the equipment from the State Contract. All agencies involved in this
3581 Investment will be encouraged to attend the Palmetto 800 Users Advisory Council (a
3582 public/private partnership to assist in managing the statewide Palmetto 800 network) for
3583 subject matter expertise and advisement.

3584

3585 Performance measures for this initiative will be comprised of the short-term goals as stated
3586 above, the number of radios that are "turned on", the number of radios that remain "turned
3587 on" after the conclusion of the grant. Also, a performance measure will be the number of
3588 users who leave legacy systems to come to the Palmetto 800 network or a private 800
3589 network. Evaluation of this plan will come in the form of insuring that the radios operate
3590 on the target channels and talkgroups, training the users in understanding the functionality
3591 of the radio equipment and the purpose of the South Carolina Communications
3592 Interoperability Plan. Also the development of agency SOPs will ensure that the radios and
3593 other equipment are used properly and agencies are trained on operating the equipment.
3594 Critical success factors for this Initiative are the radios remaining on State Contract to
3595 defray administrative burdens and a portion of the radio cost, and continuing support for
3596 Palmetto 800 or other 800 MHz networks by the agencies involved in this grant.

3597

3598   This Initiative is related to the Statewide Palmetto 800 network; therefore, there are already
3599   operational requirements, SOPs, training, funding, and technical salutations identified to
3600   ensure sustainment and proper use of equipment funded under this Initiative.

3601
3602   9. **Strategic Technology Reserve.** Funding will be utilized for a portable satellite based
3603   VoIP phone and data system to support disasters. Radio cache for 25 UHF, 25 VHF and
3604   add 100 - 800 MHz/P-25 radios. This will bring the State cache of 800 MHz radios to 250.
3605   Funding will be utilized for a portable satellite based VoIP phone and data system to
3606   support disasters. Radio cache for 25 UHF, 25 VHF and add 100
3607   800 MHz/P-25 radios. This will bring the State cache of 800 MHz radios to 250.
3608   This initiative provides a large cache of equipment, compatible with the Palmetto 800
3609   Network to be quickly deployed throughout the state to enable continued interoperable
3610   communications during a major disaster that caused site damage or a break in the T-1
3611   network service required at each site for connectivity. Since there are over one hundred
3612   800 MHz repeater sites in South Carolina, these along with service from several existing
3613   portable tower systems, can be utilized by the proposed cache of (100) 800 MHz portable
3614   radios that will be pre-programmed to operate on any of the South Carolina trunked
3615   systems as well as the National ITAC and SC tactical channels. The cache of VHF and
3616   UHF radios will be programmed with national and state tactical channels and will be
3617   utilized to provide communications support to those agencies that utilize these radios
3618   bands. These resources will also allow communications with federal agencies and agencies
3619   from other states that may be responding to the disaster.
3620
3621   The proposed voice and data satellite trailer package would allow the rapid restoration of
3622   both voice and data service. The basic class stand-by satellite service will provide
3623   connectivity to the state's central telephone switch and data network in Columbia and can
3624   support 12 simultaneous VoIP telephone calls and 12 high speed data connections. If
3625   needed during a disaster the basic service can be increased to handle additional VoIP
3626   and/or high speed data connections.   The unit will be equipped with an emergency
3627   generator and will be able to function as a standalone communications hub.
3628
3629   The proposed cache of portable radios will be state of the art to allow communications
3630   with P25, 700 MHz and narrowband equipment. The will utilize existing public safety
3631   radio spectrum. Having a centrally based cache of portable radios that can be rapidly
3632   deployed to restore essential disaster communications is a cost effective means of
3633   providing this essential disaster communications support.
3634
3635   Partners in this project will be the Division of the State CIO and satellite service provider
3636   with support being provided to state and local government public safety agencies.
3637
3638   Governance for the investment will include the Palmetto 800 Advisory Committee (see
3639   Exhibit 2 in the Statewide Communications Interoperability Plan for a listing of members
3640   and agencies). The control and management of the STR project will be under the CIO's
3641   Wireless Manager. Input will be provided by several multi-discipline committees whose
3642   key staff members collaborate, on regular bases, on many levels. These include the
3643   Counter Terrorism Coordinating Council's Communications Committee, the South
3644   Carolina 800 MHz Trunking Advisory Committee, the Palmetto 800 User's Group and the
3645   Local Government Communications Association. These committees represent state and

3646   local law enforcement, fire service, emergency medical service and emergency
3647   management agencies.
3648
3649   Some of the short term milestones for this investment are the following:
3650

3651   Milestone #1   Start Date: End Date:
3652   Develop specifications   02/01/08   03/31/08
3653   For the Satellite System,
3654   800 MHz, VHF and UHF
3655
3656   Milestone #2   Start Date: End Date:
3657   Approval of Grants and   04/01/08   04/30/08
3658   Assignment of Budget
3659   Unit Codes
3660
3661   Milestone #3   Start Date: End Date:
3662   Bid on and Order Equipment 05/01/08   07/01/08
3663
3664   Milestone #4   Start Date: End Date:
3665   Delivery of Equipment,   10/31/07   11/30/08
3666   Programming, Activation and
3667   Testing
3668
3669   Milestone #5   Start Date: End Date:
3670   Completion of Investment   12/01/08   12/31/08
3671   And Final Payment
3672
3673   Key performance measures include the following: The ability to rapidly deploy this
3674   centrally based cache of portable radios and restore essential disaster communications in a
3675   cost effect way. Additionally, the proposed cache of portable radios will be state of the art
3676   to allow communications with P25, 700 MHz and narrowband equipment. They will
3677   utilize the existing public safety radio spectrum.
3678
3679   Interoperability will be enhanced because once a disaster strikes, the area will be
3680   augmented in a very short time frame with technologically advanced equipment allowing
3681   the agencies to communicate over compatible systems. Additionally, the mobile satellite
3682   voice and trailer system will utilize advanced Voice over IP technology to provide disaster
3683   incident command telephone and data services from the state's central telecommunications
3684   network in Columbia, S. C. which avoids the use of the disaster impact area telephone and
3685   Internet services which are likely to be unavailable or unreliable due to damage and
3686   overload. The use of this system does not require the utilization of any additional public
3687   safety radio spectrum. A centrally based mobile satellite voice and data hub that can be
3688   deployed statewide is a very cost effective means of providing this essential disaster
3689   response communications service.
3690
3691

3692   **Point of Contact for Plan Implementation and State Interoperability Coordinator**
3693
3694   George Crouch, Wireless Manager
3695   Division of the State Chief Information Officer
3696   4430 Broad River Road
3697   Columbia, South Carolina 29210
3698   (803) 896-0367 office
3699   (803) 896-0098 fax
3700   gcrouch@cio.sc.gov
3701

3702   7 FUNDING

3703
3704   **State Provided:**
3705   The State CIO has submitted a budget request for appropriated funding from the
3706   Legislature to support the PSIC interoperability initiatives. Personnel cost, equipment
3707   maintenance, and recurring cost estimates have been outlined and submitted to the
3708   Legislature for review as part of the 2008/2009 budget year. The South Carolina
3709   Legislature comes back into session in January of 2008. The State agencies that are
3710   supporting this project have used existing personnel and budgets to support this initiative.
3711
3712   The State Legislature did appropriate $5,000,000 to support interoperability with the
3713   Palmetto 800 system. The funding provides for the CIO to cover 33% of user fee cost for
3714   participants in the Palmetto 800 statewide system. The funding also provides funds to
3715   cover 33% of the cost of equipment to purchase radios that are interoperable with the
3716   Palmetto 800 system. These funds will also be used to provide the State 20% global PSIC
3717   match.
3718
3719   There are a number of funding sources available to South Carolina from Legislative
3720   funding, to user fees and surcharges, as depicted in Table 17, which can be leveraged for
3721   grant funding. Also, the Homeland Security Grant Program (HSGP), along with other
3722   preparedness funds can be leveraged to support this Plan. The South Carolina Legislature
3723   is responsible for determining the most appropriate funding approach for South Carolina
3724   interoperability.
3725
3726   **Local Government:**
3727   The SC 911 legislation does allow local governments the discretion to utilize some of their
3728   911 fees to cover recurring fees to participate in the Palmetto 800 system. Most local
3729   agencies are utilizing appropriated budgets to support the PSIC 20% match requirement.
3730   In addition, local funding sources have already committed to provide an additional $10
3731   million during the PSIC grant period (beginning 1 Oct 2007) to support interoperability
3732   communications equipment consistent with PSIC goals. Ongoing local support for the
3733   Palmetto 800 Network is anticipated to continue and increase as it has over the past 15
3734   years.
3735

3736	**State, Local, Federal and Power Utility Support:**
3737	The Palmetto 800 Network has been a cost shared, self-supporting network since its
3738	inception in 1992. The system has continued to grow in size and usage over the last 15
3739	years. The funds that support the upgrades, maintenance and recurring costs of the
3740	Palmetto 800 Network are already built in to the budgets of the local jurisdictions, State
3741	agencies, federal users, power utility users, fire, EMS, law enforcement, emergency
3742	management agencies, hospitals, school districts, health agencies and universities that
3743	depend on this network for their daily communications needs. This also includes users in
3744	North Carolina and Georgia that participate in the Palmetto 800 Network.
3745	
3746	**Table 17 Funding Sources**

Funding Sources

Type	**Considerations**
Public Safety Communications Surcharge	Renewable funding source 911 Type fund (Utilities Model) has been successful in other states * Recent decrease in surcharges, i.e., federal tax rescinded Possible regulatory issues, e.g., some phone services may not be included Potential funding for all Interoperable Systems Utilities Model can be used at both the state and local levels 911 fund has call volume as a funding base 911 funding source would have direct correlation with the service being provided Would not negatively impact the General Fund
General Fund Recurring Fixed Line Item	Ongoing funding source Limited General Fund money Inconsistent funding source
General Fund Non-Recurring	Inconsistent funding source Does not allow long term budget planning May not support long term planning and development
General Fund Subscriber Fees	Ongoing funding source General Fund money Money would be redirected from Agency budgets Inconsistent funding source Would have to assess local government subscriber fees
Federal Funds	Quick upfront money Good as "short-term" funding source for one-time project expenses Short spending timelines No or little spending allowed for maintenance, personnel, installations etc. Could be one source of funding, but not the primary source

Not preferred as a long-term funding strategy
                          Matching Funds may be required
                          Would not negatively impact the General Fund

        Bond Funds   Quick upfront money
                          Bond measures are hard to pass
                          Typically results in one-time funding which is n
                          phased project
                              Would not negatively impact the General Fund
3747

8   CLOSE

3749

3750 This South Carolina Interoperability Plan (SCIP) represents our continuing efforts to
3751 address interoperability problems and solutions for South Carolina's first responder
3752 communities. The plan will be reviewed and updated throughout the year with all changes
3753 and an annual publication approved by the CTCC.

3755 The SCIP helps create a foundation on which to build our interoperability plans with
3756 support from a wide ranging group of elected official, public safety officials, state and
3757 local governments.   The PSIC planning and investment process is assisting SC in
3758 addressing key gaps in support of statewide interoperability. These elements are critical to
3759 SC in resolving communication issues of concern due to risks linked to our hurricane
3760 vulnerability, significant earthquake faults, manmade hazards, large coastal tourism areas,
3761 and ports.

3763 Point of Contact / State Interoperability Coordinator for Plan Implementation is:

3765 George Crouch, Wireless Manager
3766 Division of the State Chief Information Officer
3767 4430 Broad River Road
3768 Columbia, South Carolina 29210
3769 (803) 896-0367 office
3770 (803) 896-0098 fax
3771 gcrouch@cio.SC.gov

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3792   **Exhibit 1 State Counter Terrorism Coordinating Council**
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State Counter Terrorism Coordinating Council

State Law Enforcement Division, Chief – Chairman	South Carolina Department of Health and Environmental Control
South Carolina Emergency Management Division	
President Pro Tempore of the Senate	South Carolina Budget and Control Board CIO
Speaker of the House of Representatives	South Carolina Department of Natural Resources
State Attorney General	South Carolina Department of Transportation
State Adjutant General	South Carolina Department of Public Safety
South Carolina Superintendent of Education	South Carolina Department of Probation, Parole and Pardon
State Fire Marshal	
United States Attorney	Coast Guard Commander
Federal Bureau of Investigation SAC	South Carolina Hospital Association
South Carolina Sheriffs' Association	American Red Cross – South Carolina
South Carolina Police Chief's Association	South Carolina Chamber of Commerce
South Carolina Fire Chiefs' Association	Municipal Association of South Carolina
South Carolina Firefighters Association	South Carolina Coroner's Association
South Carolina Emergency Medical Services Association	Low Country Coordinating Council Chair
South Carolina Emergency Management Association	Midlands Coordinating Council Chair
National Emergency Numbers Association	Pee Dee Coordinating Council Chair
	Piedmont Coordinating Council Chair

Regional Counter Terrorism Coordinating Councils

Low Country Regional Coordinating Council
Midlands Regional Coordinating Council
Pee Dee Regional Coordinating Council
Piedmont Regional Coordinating Council
State Law Enforcement Division
S. C. Emergency Management Division
Sheriffs (2)*
Police Chiefs (2) *
Fire Service (2)*
Emergency Medical Services (2)*
Local Emergency Management (2)*
Dept. of Health and Environmental Control
Dept. Natural Resources
Dept. of Public Safety
COBRA Team Leader
South Carolina Chamber of Commerce
Municipal Association of South Carolina

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3796

3797   **Exhibit 2 South Carolina 800 MHz Trunking Advisory Committee**

3798

Name	Agency
Law Enforcement	
- Doug Connelly	South Carolina Highway Patrol
- Tim Simmons	State Law Enforcement Division
- Don Brookshire	Anderson County Sheriffs Department
Fire	
- Mike Sonefeld	Irmo Fire Department
EMS	
- Steve McDade	Abbeville County EMS
EMD	
- Billy Staley	Orangeburg County Emergency Management
Power Utility	
- James Burn	South Carolina Electric & Gas Co.
- John Boyt	New Horizon Electric Coop.
Government	
- Nick Babin	South Carolina Dept. of Public Safety
- Joyce Outlaw	Dept. of Health and Environmental Control
- Matthew Littleton	Anderson County Emergency Services
Large Users (500+)	
- Gary Hewett	Augusta/Richmond County, Georgia
- George Brothers	Lexington County
- Elaine Johnson	South Carolina Dept. of Public Safety
- Wayne Plemmons	South Carolina Electric & Gas Co.
- Daniel Lane	Richland County
- Freddie Thompson	Spartanburg County Communications
- Rick Hines	Columbia Police Dept.
- Eve Eggiman	Georgetown County
- Mike Horne	Greenville Police Department
- Ron Arroyo	Dorchester County
Local Government 800 MHz Systems Representative	
- William Winn	Beaufort County Emergency Management
State Contract Administration	
- George Crouch	Div. of the State Chief Information Officer
- Boykin Roseborough	Div. of the State Chief Information Officer
- Steve Davis	Div. of the State Chief Information Officer
Frequency Coordinator	
- Buddy Jordan	Div. of the State Chief Information Officer

3799

3800   **Exhibit 3 Local Government Communications Association**
3801

City - County	Representative
Beaufort County 800 System	William Winn
Charleston County 800 System	Rick Vien
City of Charleston 800 System	Chuck Reynolds
Florence County 800 System	Tommy Sullivan
Horry County 800 System	Toni Bessent
Marion County 800 System	Vacant
Sumter County 800 System	Linn Skipper
York County 800 System	Cotton Howell

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3825 **Exhibit 4 Palmetto 800 Network Users**

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State Government Users	Local Government Users
SC B&CB - Div Of Local Government	Clarendon Fire Dept
SC Dept. Of Disabilities & Special Need	Jasper Sheriffs Office
SC Dept Of Mental Health	Jasper
SC Dept Of Mental Health	Jasper Co Fire And Rescue
SC DMH Public Safety	Williamsburg Government
SC Dept. Of Consumer Affairs	Williamsburg Fire
SC Dept. Of Corrections	Greenville
SC Dept Of Corrections	Greenville Sheriff
SC DHEC	Greenville Solid Waste
SC Dept. Of Juvenile Justice	Aiken Sheriff's Office
SC Dept. Of Natural Resources	Aiken Detention Center
SC Dept. Of Transportation	Aiken Co Sheriff Reserve
SC Employment Security Commission	Aiken Storm
SC Dept. Of Public Safety	Aiken Coroners
State Transport Police	Lee Sheriff's Department
Ofc Of Professional Responsibility	Lee E 911 Communications
Criminal Justice Academy	Lee Emergency Preparedness
SC Bureau Of Protective Services	Lee Fire / EOC
SC Division Of State CIO	Dillon Sheriff's Office
SC Probation Pardon & Parole	Dillon Emergency Preparedness
SC Parks Recreation & Tourism	Chester Sheriff's Office
Army National Guard	Chester Co Emergency Management
SC Emergency Management Division	Fairfield Sheriff's Office
SC State EMS	Fairfield Coroner
SC Law Enforcement Division	Berkeley Communications
Public Service Commission	Berkeley Coroner Office
SC Budget & Control Board	Kershaw Sheriff's Office
SC Fire Academy	Kershaw Fire Service
Office Of Regulatory Staff	Kershaw Co E911 Communications
SC House Of Representatives	Anderson Sheriff's Office
SC Senate	Anderson Coroner
SC State Task Force	Anderson Emergency Services
Office Of The Adjutant General	Bamberg Emergency Services
Lower Savannah / Aiken	Bamberg Office Of Aging
SC Dept Of Labor Licensing And Regulations	Mauldin
SC LIR State Fire Marshalls Office	Newberry City Police Dept
SC Forestry Commission	Andrews Police Dept
Will Lou Gray Opportunity School	Greer Police Dept
Orangeburg-Calhoun Technical College	Prosperity Police Dept
State University Police Dept	Calhoun County VFD
University Of South Carolina Housing	Whitmire Police Dept
University Of South Carolina Police	Abbeville City Police Department
Meducare/MUSC	Abbeville City Fire Dept
Medical Univ. Of SC	Due West Police Dept
MUSC Public Safety	Rock Hill Police Dept
Augusta State University	Lancaster City Fire
Clemson University Fire And Ems	Lancaster City Police Dept
Clemson University Poultry Health	Calhoun Falls
Clemson University Plant Industry	Gaffney
Clemson University Police	Tega Cay City Police Dept
	Clemson City Police Dept

Federal Users

Federal Bureau Of Investigations
Ft. Jackson 5th Bde 87th Div
SC Army National Guard
Ft. Jackson Law Enforcement
Bureau Of Alcohol, Tobacco & Firearms
US Fish And Wildlife Service
South Carolina National Guard
US Marshal Service
Social Security Administration
US Department Of Justice
Naval Hospital Charleston

Utility Users

SCE&G
Aiken Electric Cooperative
Edisto Electric Cooperative
Laurens Electric Cooperative
New Horizon Electric Cooperative
Santee Cooper
PSNC Energy
Berkeley Electric Cooperative
Duke Power
Progress Energy

Other Users

Carolina Med Care
Community Transport Service
Albermarle Corporation
Eastman
Gold Cross Ems
Medshore Ambulance Service
Rural Metro Ambulance Service
Care Alliance Health Svcs.
Myrtle Beach Communications
Communications Specialists
Carolina Communications
Radio Communication Service
Mobile Communications Of Charleston
Columbia College Police Dept.
Lifereach
Airmethods
First Communications
Nextel Communications
Call24
Seizmore Inc. Security
Personal Care Ambulance
Mobile Care Health Services Llc
Trident Health Systems
Palmetto Ambulance Service
Palmetto Health Richland
Marlboro Park Hospital
Orangeburg Regional Medical Center
Roper St Francis Healthcare
Roper St Francis Healthcare

Bennetsville Police Dept

Local Government Users

Easley Police Dept
Central Police Department
McColl Police Dept
Pageland City Police
Chesterfield Police Dept
McBee Police Department
Union City Police
Liberty Police Dept
Ware Shoals Police Dept
Clio Police Dept
Seneca Police Dept
Greenwood Police Dept
McCormick Police Dept
Fort Mill Police Dept
Westminster Polce Dept
Ninety Six Police Dept
Saluda Police Dept
Brunson Police Dept
Williston Police Dept
Barnwell Police Dept
Blackville Police Dept
Fairfax Police Dept
Allendale Police Dept
Walhalla Police Dept
Bamberg Police Dept
Olar Police Department
Gifford Police Department
Edgefield Police Dept
Ashley River Fire Department
Batesburg-Leesville
Leesville Rescue Squad
Bowman Police Dept
Branchville Police Department
Branchville Rescue Squad
Chapin Police Dept
Blythe
Columbia Police Dept
Columbia Fire Department
Columbia
Columbia Fleet Services
Columbia
West Columbia Police Dept
Eastover Police Dept
Forest Acres Police Dept.
Harleyville Rural Fire Dept
Hephzibah Police Dept
Holly Hill Police Dept
Elloree Police Dept
Irmo Fire District
North Police Dept.
Norway Police Dept
Ridgeville Police Department
Ridgeville Volunteer Fire Dept
Santee Police Dept

Other Users
Wackenhut Services Inc
Oconee Memorial Hospital
Presbyterian College Campus Police

Local Government Users
Richland - Lexington School Dist 5
Palmetto Health Baptist
Richland Memorial Security
Richland Memorial Careforce
Richland Memorial Engineering Dept
Richland Memorial NICU
Richland Memorial Senior Care
Greenville Transit Authority
Lexington Medical Center
LRADIC
Georgetown Fire
Georgetown Ems
Georgetown Emergency Services
Georgetown EPD
Midway Fire Rescue
Georgetown Coroner
Georgetown
Richland School District Two
South Greenville Fire District
Charleston Schools
Richland One School District
Newberry Sheriff
Edgefield Sheriff
Edgefield Co Senior Citizens Council
Edgefield EMA
Cherokee
Union Sheriff
Union Emergency Services
Lancaster Fire Services
Lancaster Ems
Lancaster Sheriff
St. Matthews Town Of
Generations Unlimited
Cheraw Fire Dept
Cheraw Police Dept
York Emergency Management
McCormick Sheriff
McCormick Co Emergency Services
Bamberg Co Sheriff
Florence
Newberry Memorial Hospital
Oconee Sheriff
Pine Grove Fire Dept
Pickens EMS
Pickens Sheriff
Holly Springs Fire Dept
Pumpkintown Fire Dept
Whitesville Fire Dept
Forty One Community Vol FD
Hartsville Police Dept

Springdale Police Dept
Local Government Users
Springfield Police Dept
Chester Police Department
Eutawville Police Department
St George Police Dept
St George Fire Dept
Summerville Police Dept
Vance Police Dept
Cayce
Ridgeway Police Department
New Ellenton Police Department
Burnettown Police Department
Camden Police Department
Salley Police Department
Fort Lawn Police Department
Elgin Police Department
Perry
Great Falls Police Department
Aiken Department Of Public Safety
North Augusta Department Of Public Safety
Bethune Police Department
Pendleton Police Department
Darlington Police Department
Darlington Co. Sheriff Office
Lamar Police Department
Sumter City Police Department
West Pelzer Police Department
Anderson City Police Department
Anderson City Fire Department
Murrells Inlet
Georgetown Sheriff Office
Georgetown Communications
Georgetown
Laurens Sheriff Dept
Laurens Police Dept
Laurens EMS
Laurens EMA
Iva Police Department
Santee Wateree RTA
Williamston Police Department
Georgetown City Police Department
Georgetown City Fire / Grant 04
Georgetown City Fire
Belton Police Department
Honea Path Police Department
Georgetown City Electric Dept
Calhoun Sheriffs Office
Chesterfield Sheriffs Dept
Cameron Police Department
Simpsonville Police Department
Society Hill Police Department
Pelion Police Department
Greenwood
Saluda EMD

Local Government Users	Local Government Users
Pimlico Rural Vol Fire Dept	Barnwell Sheriff Office
Allendale Sheriff	Hampton Sheriff
Lower Savannah / Allendale	Marlboro Sheriff
Allendale Barnwell Counties	Abbeville Sheriff
Aiken Area Council On Aging Inc	Abbeville Emergency Mgt
Columbia Housing Authority	Abbeville Co Fire Commission
Midlands Technical College	Abbeville Coroner
Clinton Police Department	Williamsburg Tec
Clinton High School	Longridge Rural Fire Dept.

3827

3828   **Exhibit 5 Palmetto 800 User's Group Meeting**

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3830   # Agencies in attendance at the May 16, 2007
3831   # Palmetto 800 User's Group meeting:

3832

Aiken County Coroner	Jasper County
Aiken County Emergency Preparedness	Kershaw County E911 Director
Aiken Dept. of Public Safety	Kershaw County Fire Service
Anderson County Sheriff's Office	Lee County Fire Chief
Augusta Richmond County	Lexington Medical Center Public Safety
Berkeley County EPD	Lexington Police Department
Berkeley County Sheriff's Office	Livestock Poultry-Health
Brunson Police Dept	Marion County Director
Carolina Communications	Mental Health
Charleston County	Mobile Communications of Chas
Chester County EMA	Mt Pleasant Police Dept
City of Columbia	MUSC
Clarendon County	Pelion Police
Clemson	Pickens County Emergency Management
Columbia Police Dept	Pickens County EMS
DHEC	PPP
Division of the State CIO	Prosperity Police Dept
DNR	Richland County Emergency Services
DOT	Richland County Sheriff's Office
DPS Florence Communications Center	Santee Cooper
Edisto Electric Coop	South Carolina LLR
FBI	South Carolina EMD
Fort Lawn Police Dept	South Carolina HP
Georgetown County	SLED
Gifford Police Dept	Spartanburg 911
Goose Creek Police Dept	Summerville Police Dept
Greenville City	Sumter
Hanahan Police Dept	Town of North
Hartsville Police Department	Town of Perry
Irmo Police Dept	West Columbia Police Dept

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3841 **Exhibit 6 Emergency Communications Equipment Resources**
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3845 **CIO Communications Equipment Resources**
3846 - (2) 800 MHz 10 Watt Portable Repeaters.
3847 - (2) 800 MHz 25 Watt Portable Repeaters
3848 - UHF 10 Watt Portable Repeater.
3849 - VHF 10 Watt Portable Repeater.
3850 - (200) 800 MHz Handheld Radios
3851 - (25) VHF Handheld Radios
3852 - (25) UHF Handheld Radios
3853 - 35' portable antennas
3854 - ACU-1000
3855 - (10) 6 bay rack chargers
3856 - 75' Portable Communications Towers
3857 - (3)MSAT Portable Satellite phones/radios
3858 - (9)Iridium Portable Satellite Phones
3859
3860 **CIO Portable Communications Tower Resources**
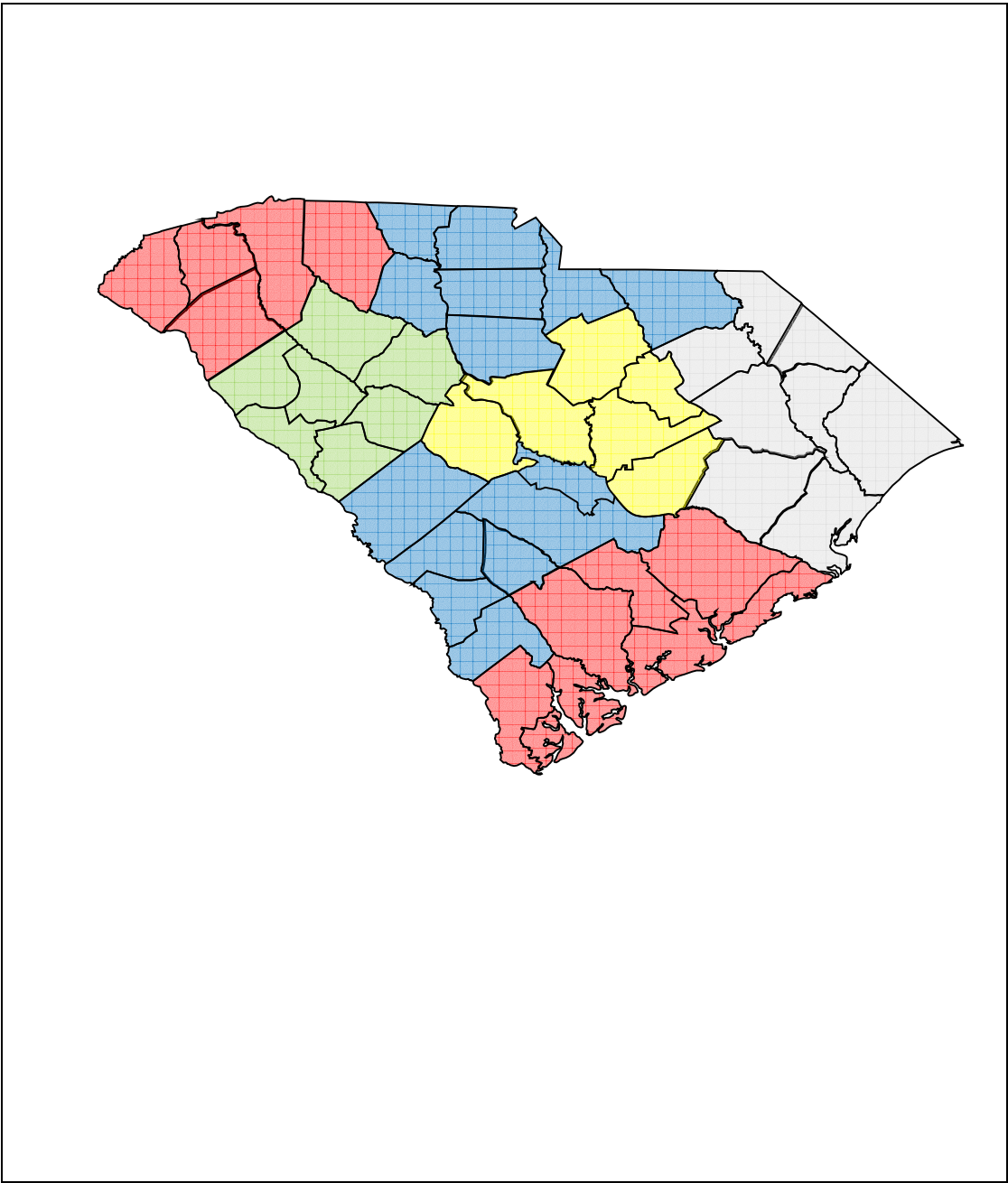3861 The CIO has two (2) portable communications towers, each is equipped with:
3862 - (2) 800 MHz Conventional Repeaters.
3863 - UHF Conventional Repeater.
3864 - VHF Conventional Repeater.
3865 - 7,000 watt generator
3866 - 25 gallon fuel tank
3867 - (4) 5 gallon fuel cans
3868 - (2) 500 watt quartz lights
3869 - 2000 watt portable generator
3870 - 6 bay rack radio chargers
3871 - VHF, UHF & 800 MHz Desk Top Control Station
3872 - DC Rectifier system
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3883   **Exhibit 7** South Carolina Counter Terrorism Coordinating Council Regions
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3886   **South Carolina**
3887   **Counter Terrorism Coordinating Council Regions**

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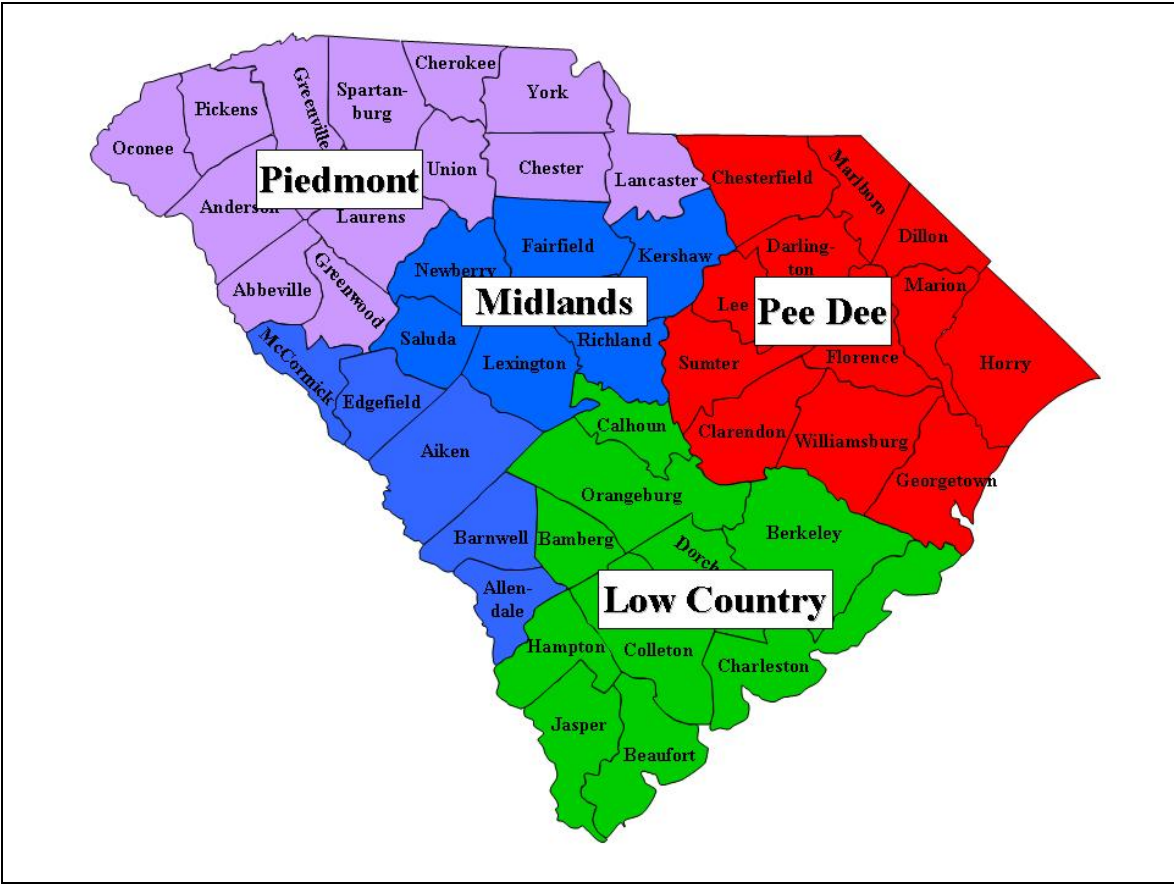
Exhibit 8 800 MHz Interoperability Regions

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Exhibit 9 VHF & UHF Mutual Aid Communications Regions

GREENVILLE

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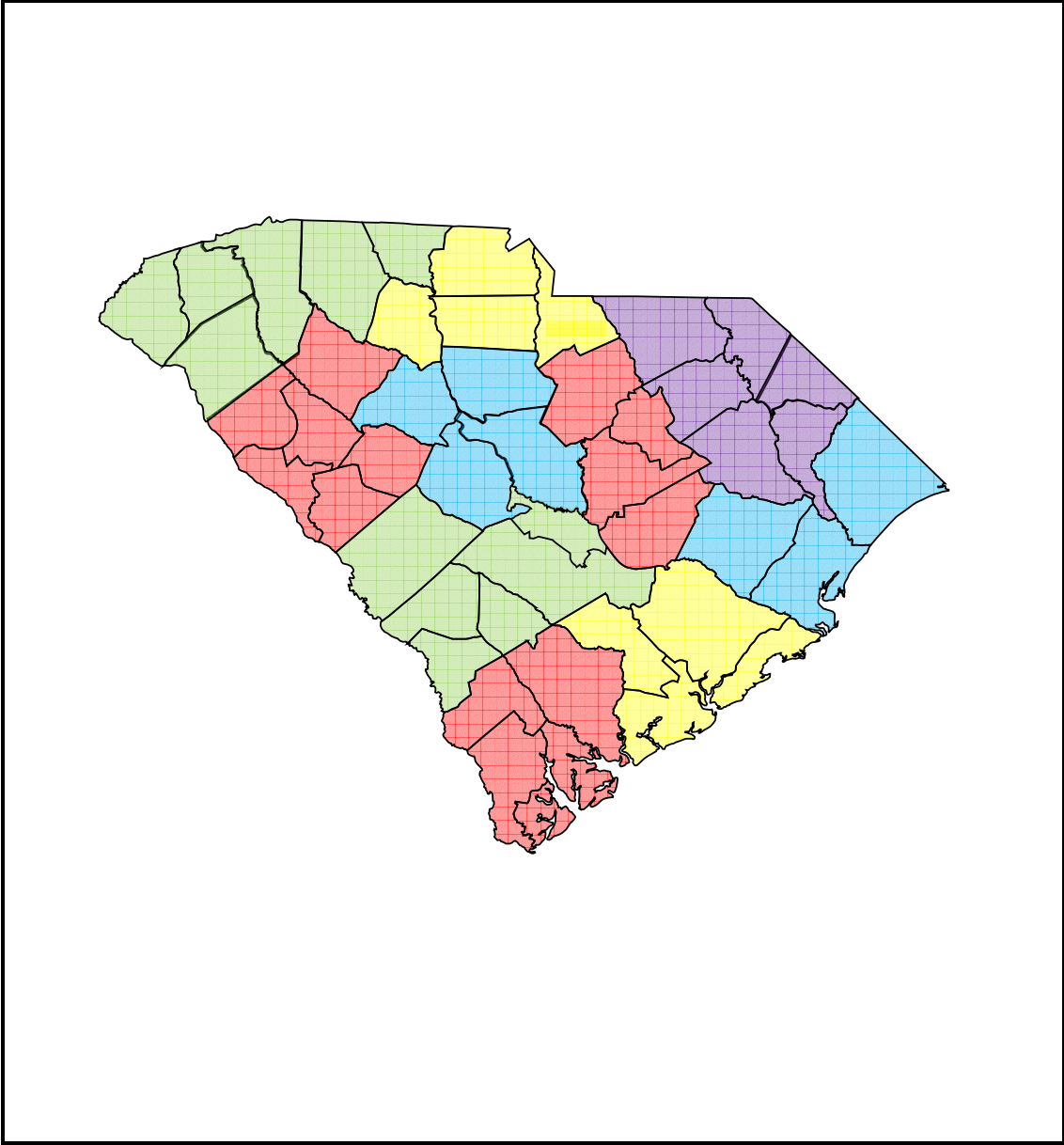
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Appendix 1: **SCIP Evaluation Criteria Compliance Matrix**

Criteria #	Description	Section/Page #
1.	**Background and Preliminary Steps**	
1.1	Provide an overview and background information on the state and its regions. Include geographic and demographic information.	Section 2.0/ Page 11-17 Section 2.1/ Page 17
1.2	List all agencies and organizations that participated in developing the plan. (List them according to the categories recommended for a communications interoperability committee in the All-Inclusive Approach section above.)	Section 2.2 / Page 33-34
1.3	Identify the point of contact. DHS expects that each state will have a full time interoperability coordinator. The coordinator should not represent or be affiliated with any one particular discipline and should not have to balance the coordinator duties with other responsibilities.	Section 2.3 / Page 34
1.4	Describe the communications and interoperability environment of the current emergency response effort.	Section 4 / Page 40-52
1.5	Include a problem definition and possible solutions that addresses the challenges identified in achieving interoperability within the SAFECOM Interoperability Continuum.	Section 4/ Page 40-44 Section 5 / Page 87 Section 5 / Page 91-97 Section 6 / Page 100-127
1.6	Identify any Tactical Interoperability Communications Plans in the state.	Section 2.1.3 / Page 29-32
1.7	Set the scope and timeframe of the plan.	Section 2.4 / Page 34-35
2.	**Strategy**	
2.1	Describe the strategic vision, goals, and objectives for improving emergency response interagency wireless communications statewide, including how they connect with existing plans within the state.	Section 5.1, 3 / 86-90
2.2	Provide a strategic plan for coordination with neighboring states. If applicable, include a plan for coordination with neighboring countries.	Section 5.4/ Page 92
2.3	Provide a strategic plan for addressing data interoperability in addition to voice interoperability.	Section 5.4/ Page 93
2.4	Describe a strategy for addressing catastrophic loss of communication assets by developing redundancies in the communications interoperability plan.	Section 5.4/ Page 93-95
2.5	Describe how the plan is, or will become, compliant with the National Incident Management System (NIMS) and the National Response Plan.	Section 5.5/ Page 98
2.6	Describe a strategy for addressing communications interoperability with the safety and security elements of the major transit systems, intercity bus service providers, ports, and passenger rail operations within the state.	Section 5.4/ Page 95
2.7	Describe the process for periodic review and revision of the state plan.	Section 5.6/ Page 99
3.	**Methodology**	
3.1	Describe the method by which multi-jurisdictional, multi-disciplinary input was provided from all regions of the state. For an example of a methodology that ensures input from all regions, see the Statewide Communication Interoperability Plan, or SCIP, methodology developed by SAFECOM.	Section 3.1/ Page 36-37
3.2	Define the process for continuing to have local input and for building local support of the plan.	Section 3.2/ Page 38
3.3	Define how the TICPs were incorporated into the statewide plan.	Section 3.3/ Page 38
3.4	Describe the strategy for implementing all components of the statewide plan.	Section 3.4/ Page 38, 39
4.	**Governance**	
4.1	Identify the executive or legislative authority for the governing body of the interoperability effort.	Section 4.1 / Page 53, 57
4.2	Provide an overview of the governance structure that will oversee development and implementation of the plan. Illustrate how it is representative of all of the relevant emergency response disciplines and regions in the state.	Section 4.1 / Page 53-57
4.3	Identify the executive or legislative authority for the governing body of the interoperability effort.	This is a duplicate—see above.

4.4	Provide an overview of the governance structure that will oversee development and implementation of the plan. Illustrate how it is representative of all of the relevant emergency response disciplines and regions in the state.	This is a duplicate—see above.
4.5	Provide the charter for the governing body, and use the charter to state the principles, roles, responsibilities, and processes.	Section 4.1/ Page 53-57
4.6	Identify the members of the governing body and any of its committees. (List them according to the categories recommended for a communications interoperability committee in the All-Inclusive Approach section above.)	Section 4.1 refers to Exhibits 1-4 / Page 132-138
5.	**Technology**	
5.1	Include a statewide capabilities assessment (or a plan for one) which includes, critical communications equipment and related interoperability issues. At a minimum this should include types of radio systems, data and incident management systems, the manufacturer, and frequency assignments for each major emergency responder organization within the state. Ultimately more detailed information will be required to complete the documentation of a migration strategy. States may use the Communications Asset Survey and Mapping (CASM) tool to conduct this assessment.	Section 4.0 / Page 40-52 Section 4.2 / Page 59-75 Section 6.0 / Page 115-117
5.2	Describe plans for continuing support of legacy systems, and developing interfaces among disparate systems, while migrating to newer technologies.	Section 4.2.3/ Page 72-74
5.2.1	Describe the migration plan for moving from existing technologies to newly procured technologies.	Section 4.2.3/ Page 72-74
5.2.2	Describe the process that will be used to ensure that new purchases comply with the statewide plan, while generally allowing existing equipment to serve out its useful life.	Section 6/ Page 101-102
6.	**Standard Operating Procedures (SOPs)**	
6.1	Include an assessment of current local, regional, and state operating procedures which support interoperability.	Section 4.3/ Page 75-81
6.2	Define the process by which the state, regions, and localities will develop, manage, maintain, upgrade, and communicate standard operating procedures (SOPs), as appropriate.	Section 4.3/ Page 75-81
6.3	Identify the agencies included in the development of the SOPs, and the agencies expected to comply with the SOPs.	Section 4.3/ Page 75 see Exhibit 2 on page 133
6.4	Demonstrate how the SOPs are NIMS-compliant in terms of the Incident Command System (ICS) and preparedness.	Section 4.3/ Page 80-81
7.	**Training and Exercises**	
7.1	Define the process by which the state will develop, manage, maintain and upgrade, or coordinate as appropriate, a statewide training and exercises program.	Section 4.4 / Page 82-83
7.2	Describe the process for offering and requiring training and exercises, as well as any certification that will be needed.	Section 4.4/ Page 82-83
7.3	Explain how the process ensures that training is cross-disciplinary.	Section 4.4/ Page 82
8.	**Usage**	
8.1	Describe the plan for ensuring regular usage of the relevant equipment and the SOPs needed to improve interoperability.	Section 4.5/ Page 84-85
9.	**Funding**	
9.1	Identify committed sources of funding, or the process for identifying and securing short- and long-term funding.	Section 7/ Page 128-130
9.2	Include a plan for the development of a comprehensive funding strategy. The plan should include a process for identifying ongoing funding sources, anticipated costs, and resources needed for project management and leveraging active projects.	Section 7/ Page 128-130
10.	**Implementation**	
10.1	Describe the prioritized action plan with short- and long-term goals for achieving the objectives.	Section 5.4 / Page 96, 97 Section 6.0 / Page 103-127
10.2	Describe the performance measures that will allow policy makers to track	Section 6/ Page 105, 107,

		the progress and success of initiatives.	110, 113, 116-117, 118-119, 122, 124, 127
10.3		Describe the plan for educating policy makers and practitioners on interoperability goals and initiatives.	Section 6/ Page 102
10.4		Describe the roles and opportunities for involvement of all local, state, and tribal agencies in the implementation of the statewide plan.	Section 6/ Page 100-101, 104, 107, 109, 112, 113, 117, 119, 121, 124, 126
10.5		Establish a plan for identifying, developing, and overseeing operational requirements, SOPs, training, technical solutions, and short- and long-term funding sources.	Section 6/ Page 100-102
10.6		Identify a POC responsible for implementing the plan.	Section 6/ Page 128
10.7		Describe critical success factors for implementation of the plan.	Section 6/ Page 105, 107, 110, 113, 116, 118-119, 121-122, 124, 127
11.		**PSIC Requirements**	
11.1		Describe how public safety agencies will plan and coordinate, acquire, deploy and train on interoperable communications equipment, software and systems that: 1) utilize reallocated public safety - the public safety spectrum in the 700 MHz frequency band; 2) enable interoperability with communication systems that can utilize reallocated public safety spectrum for radio communications; or 3) otherwise improve or advance the interoperability of public safety communications system that utilize other public safety spectrum bands	Throughout Plan; Some specific references include for: 1) 700 MHz Page 14, 35, 50, 51, 75, 91, 102, 116, 126. 2) Any 800 MHz reference. 3) All UHF/VHF references…See Page 41, 72-74, 115-117.
11.2		Describe how a strategic technology reserve (STR) will be established and implemented to pre-position or secure interoperable communications in advance for immediate deployment in an emergency or major disaster.	Section 5.3 & 5.4/ Page 90, 94-95, 126-127
11.3		Describe how local and tribal government entities' interoperable communications needs have been included in the planning process and how their needs are being addressed.	Section 3.1/ Page 36-37
11.4		Describe how authorized non-governmental organizations' interoperable communications needs have been included in the planning process and how their needs are being addressed (if applicable).	Section 3.1/ Page 36-37

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